Report to Business & Transformation Scrutiny Panel

Agenda Item: A.6

Meeting Date:	22nd March 2018
Portfolio:	Finance, Governance and Resources
Key Decision:	Yes: Recorded in the Notice Ref:
Within Policy and Budget Framework	Yes
Public / Private	Public

Title:	Civic Centre – Ground Floor Flood Reinstatement
Report of:	Deputy Chief Executive
Report Number:	GD 21/18

Purpose / Summary:

The attached Executive report (GD11/18) outlines the final proposals for the reinstatement of the Civic Centre.

These include: a new entrance, reception area and customer contact centre; a new Council chamber and conference facilities, open meeting space for Council staff and partners, additional storage space, office units for potential new partners, toilets and other ancillary accommodation. The redesign of the ground floor will seek to improve customers, partners, members and staff usage of the entire site. The work will resolve the current poor access arrangements to the Chamber by bringing this facility to ground floor level. The work will also follow good practise on design for physical access, dementia, sight and hearing loss across the property.

The report also finalises proposals for an extension to the Civic Centre public car park.

The Panel is invited to consider the proposals, and provide any observations and comments on the report for consideration by the Executive at its meeting on 16 April 2018.

Recommendations:

The Panel note the proposals and consider and provide any observations and comments for consideration by the Executive in order to inform the way forward.

Tracking

Executive:	**12 February 2018**
Overview and Scrutiny:	**22 March 2018**
Executive:	**16 April 2018**
Council:	**24 April 2018**

CARLISLE CITY COUNCIL

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Report to Executive

Agenda Item:

Meeting Date:	12th February 2018
Portfolio:	Finance, Governance and Resources
Key Decision:	Yes: Recorded in the Notice Ref:
Within Policy and Budget Framework	Yes
Public / Private	Public

Title:	Civic Centre – Ground Floor Flood Reinstatement
Report of:	Deputy Chief Executive
Report Number:	GD11/18

Purpose / Summary:

The Purpose of this report is to update the Executive on the final proposals for the reinstatement of the Civic Centre.

These include: a new entrance, reception area and customer contact centre; a new Council chamber and conference facilities, open meeting space for Council staff and partners, additional storage space, office units for potential new partners, toilets and other ancillary accommodation. The redesign of the ground floor will seek to improve customers, partners, members and staff usage of the entire site. The work will resolve the current poor access arrangements to the Chamber by bringing this facility to ground floor level. The work will also follow good practise on design for physical access, dementia, sight and hearing loss across the property.

The report also finalises proposals for an extension to the Civic Centre public car park.

Subject to Executive members views the report also proposes to consult members of the Business and Transformation Scrutiny before seeking a final decision to proceed from Full Council.

Recommendations:

That the Executive:

1. Review the final layout and design proposals contained within this report, both for the ground floor reinstatement and the other plans for the entire site.
2. Review the final arrangements for funding the development, using our insurance settlement, capital programme and the proposed 'invest to save' initiative as included in the part B report.
3. Approve the acceptance of the insurer's offer in full and final settlement of the insurance claim.
4. Seeks the views of the Business and Transformation Scrutiny Panel (22nd March 2018) before finalising recommendations to Full Council (24th April 2018).

Tracking

Executive:	**12 February 2018**
Overview and Scrutiny:	**22 March 2018**
Executive:	**16 April 2018**
Council:	**24 April 2018**

1. BACKGROUND

As noted in previous reports to Executive and Scrutiny panels the floods arising from Storm Desmond, December 2015 caused extensive damage to the Civic Centre. The basement and ground floor of the Civic Centre were under water which reached 2.4 m above ground level. During the initial clean up phase over 4.72 million litres of water was pumped from the building.

The full background to this report and its proposals is extensively documented in a report to Executive 28th August 2017 (CS21/17).

Since this last report and with the approval of Executive, work has continued to complete final design details and costs for the development. These build on the initial design and costs and seek to provide a clear and realistic set of proposals that will be used to tender the project in April 2018.

2. BUILDING PROPOSALS

2.1 Ground floor accommodation:

Since the initial design work Council officers have worked closely with WYG (our design and quantity surveyors) to review each element of this design on a room by room basis.

This work has resulted in a revised ground floor layout to better reflect our needs and has also identified more accurate costs for delivery. This revised layout is attached at Appendix B and WYG's report is included in Appendix D.

The key features of this new layout are similar to the initial design but are now refined to better reflect the intended use and the affordability of the works.

The ground floor facilities will now contain:
Customer, members, staff and partner facilities:

- A new customer entrance is proposed to give the building a renewed presence and also to assist with access and energy efficiency.

- A new reception zone will create a focal point for all visitors and customers, this includes a waiting area and disabled access toilet.

- A new customer contact centre has been designed to the front elevation of the building with a waiting area, service desks and 13 private interview

rooms. The interview rooms have separate access arrangements to ensure safety.

- To the left of reception and through the visitor waiting area is a meeting space and quiet working area for members, staff and partners. Opportunities for wifi enabled agile working will be available in the areas designated.

- An improved delivery area is proposed via the rear of the building and a storage area is planned in this vicinity.

- In addition there is now also space for additional toilets for the new meeting space.

- There is an additional area under the tower which has been identified for possible partner occupation and benefits from separate access if required. The existing space within the former rates hall and beyond has been converted into flexible meeting and conference space.

Civic and conference facilities:

- The Council Chamber would be relocated to the former contact centre / rates hall. This new highly flexible space would be used as a modern, fully accessible Council chamber and conference / exhibition centre. It is felt that the extended ceiling height and central location of the hall make this an attractive, open and highly visible place for the Civic and democratic activities of the Council. The new plans would provide a new purpose built and wholly demountable chamber space that could also be used for a full range of other functions and events. These other functions may provide additional income to the Council if marketed and serviced appropriately.

  The existing facility, located at first floor level within the Octagon is not fit for purpose, access is poor and non DDA compliant, temperature control is difficult, audio / visual services are outdated and furniture and fittings are tired and in need of replacement and the costs of upgrading are estimated at £144,000. These factors result in very low levels of usage with the facility only used on average twice every six weeks.

- To the rear of the proposed new chamber is a suite (3) of flexible meeting spaces with full audio-visual equipment provided. These could be used to supplement the new chamber or for separate functions. All the spaces would be serviced by accessible toilets at ground floor level and by a kitchen located adjacent to the meeting rooms.

- It is proposed that the existing chamber be demolished and replaced with additional car parking. Specialist advice was sought on options for the former chamber, report contained in appendix C, and the conclusion was that the space would have low income generation potential and would be very difficult to let and their recommendation was that the best return would be obtained by demolishing the Octagon and expanding the Civic Centre car park to create an additional 44 pay and display spaces. The invest to save initiative is contained in the Part B report.

- At this stage it is difficult to accurately predict revenue from the meeting space however as a minimum meetings and events currently held off-site would utilise the new chamber resulting in lower costs (Carlisle Partnership, Carlisle Ambassadors, Cumbria Leaders (when Carlisle City Council is host), Management briefing and elections).

- The 9% reduction in overall floorspace would reduce day to day running costs.

The current proposals are shown in the plan included within appendix B. The proposals indicate a two-phase development, this is to ensure that those elements we consider essential to the project, indicated in green on the plan, are completed as part of the first phase, with the other non-essential works, indicated in red, undertaken at a later stage when funding allows. The proposals have been designed to be flexible to allow measures to be incorporated should funding allow e.g. generation of additional income.

2.2 Further ground floor considerations:

Flood resilience has been a major consideration in these plans and it is proposed that the project uses materials that will speed up the recovery from any future flooding event. Further investigation has been undertaken into cost effective flood resilient materials and we now intend to use rendered block construction for internal partitions rather than the glazed panels originally envisaged which proved to be extremely costly and not suitable for some of our partner's conference requirements. The rendered block walls can simply be washed down should flooding ever occur.

Some flood resilience work has already been undertaken with electrical equipment and lift gear being relocated to the upper floors. Investigation into relocating the heating boilers away from the basement has proved this not to be cost effective with

the cost of relocation estimated to be circa £200,000. Replacement after the last flood cost £38,000.

With advances in information technology the redevelopment works will now operate via Council and public Wi-Fi systems negating the need for vast amount of cabling and server space.

In addition, all furniture would be designed to be easily moved to the first floor should flooding be anticipated. This demountable approach is a key concept for the ground floor redevelopment and will be brought visibly into the Council's business continuity plans and procedures.

2.3 Timescales

An outline timeline for the reinstatement project is shown in Appendix E, this is of course subject to the decision-making timetable identified at the beginning of this report and a successful tender process.

2.4 Partnership Proposals

For a number of years, the Council has successfully attracted and worked with a full range of partners to deliver key services from the Civic Centre. The Council has a strong track record of fostering new partnerships and delivering joined up services with the Department of Work and Pensions, Police, Passport Office, Job Centre, Riverside Housing, GLL and a number of charity providers.

The proposals contained within this report seek to continue and enhance this approach to collaborative public services. The Council is already in early negotiations with the Police, NHS Acute Trust / Cumberland Infirmary, Riverside Housing and a range of other smaller partners to try and bring together key customers services (both front and back office) onto one site.

To assist with these developments, officers have been working with partners to establish needs and match these to our space and service capacity in the Civic Centre. The proposals have been further refined to allow future partners to come on board with the area under the tower being left completely vacant as it is felt this offers the greatest flexibility for partners that may require a significant front of house facility.

3. NEXT STEPS

Subject to member approval of these proposals the next steps will be:

- Final approval of budget
- Undertake a tender process
- Resolve any planning issues
- Award the contract
- Complete the build process

4. CONSULTATION

Internally via the City Council's corporate structures and processes.

5. CONCLUSION AND REASONS FOR RECOMMENDATIONS

The December 2015 floods have created an opportunity to remodel the Civic Centre to provide a facility that is fit for purpose not only for the City Council but also for a number of partner organisations. Providing a one-stop centre for information and assistance for the citizens of Carlisle. The proposals also offer opportunities to create additional revenue streams for the City Council and reduce operating costs.

6. CONTRIBUTION TO THE CARLISLE PLAN PRIORITIES

The initiative embraces partnership working with other public sector bodies.

The generation of additional income may help with the provision and support of front line services.

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Appendices attached to report:	**Appendix A – Civic Centre Pre-flood** **Appendix B – Proposed Layout** **Appendix C – Carigiet Cowen Octagon report** **Appendix D – WYG Outline Design Report** **Appendix E – Draft programme & timescale**

Note: in compliance with section 100d of the Local Government (Access to Information) Act 1985 the report has been prepared in part from the following papers:

- **None**

CORPORATE IMPLICATIONS/RISKS:

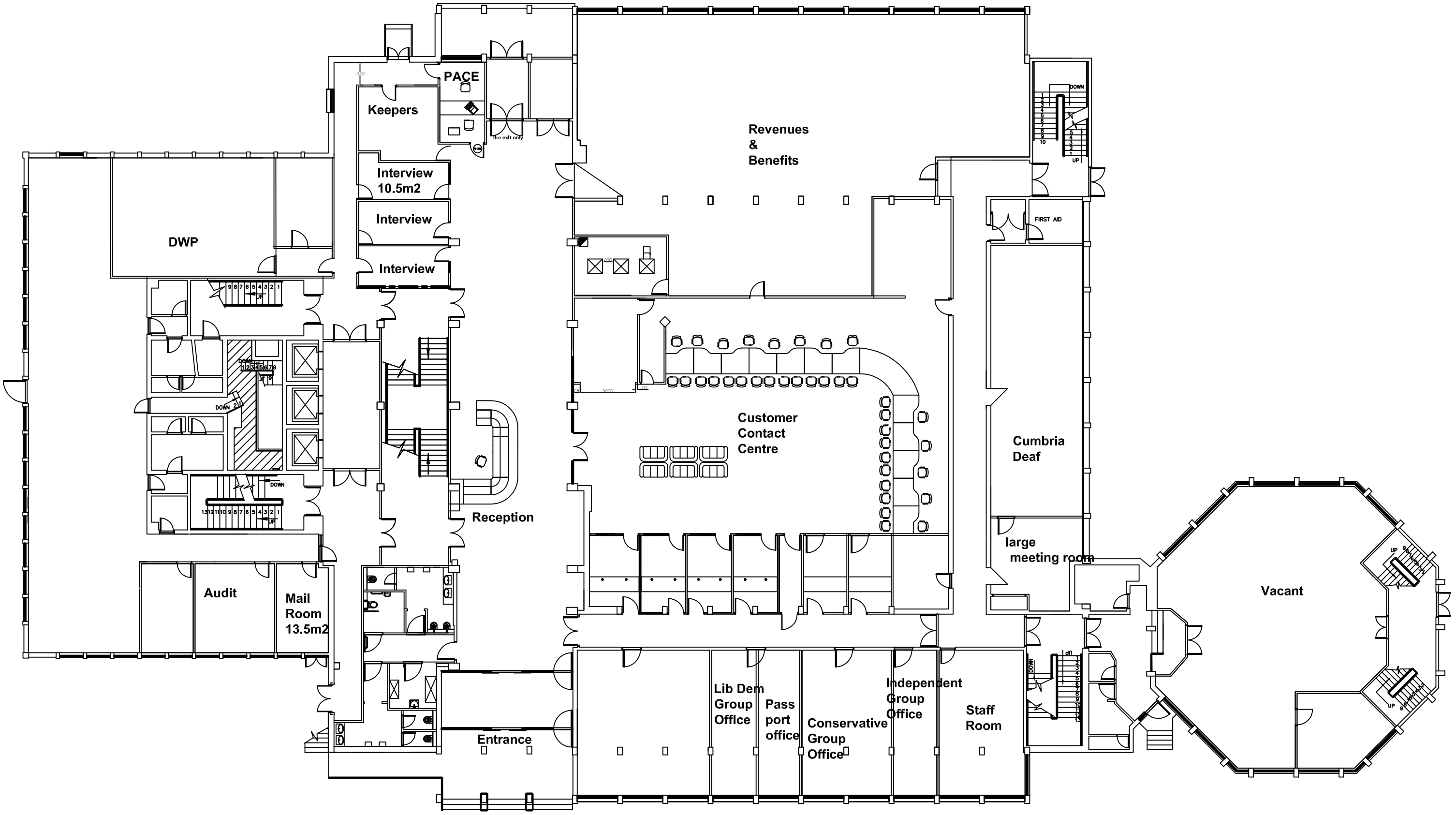
Community Services -

Corporate Support and Resources –

Economic Development – Conference facilities – Conference centres are Class D1 use which would require a change of use planning application if the conference facilities will ultimately be the dominant use of the ground floor.

Council Chamber demolition and extension of car parking would need consent and planning permission and this needs to be factored into the timescale. Any proposed development will need to take account of the Conservation Area.

Governance and Regulatory Services – The Council, in accordance with its fiduciary duty, must manage its resources, of which the Civic Centre is one, so as to best deliver its services.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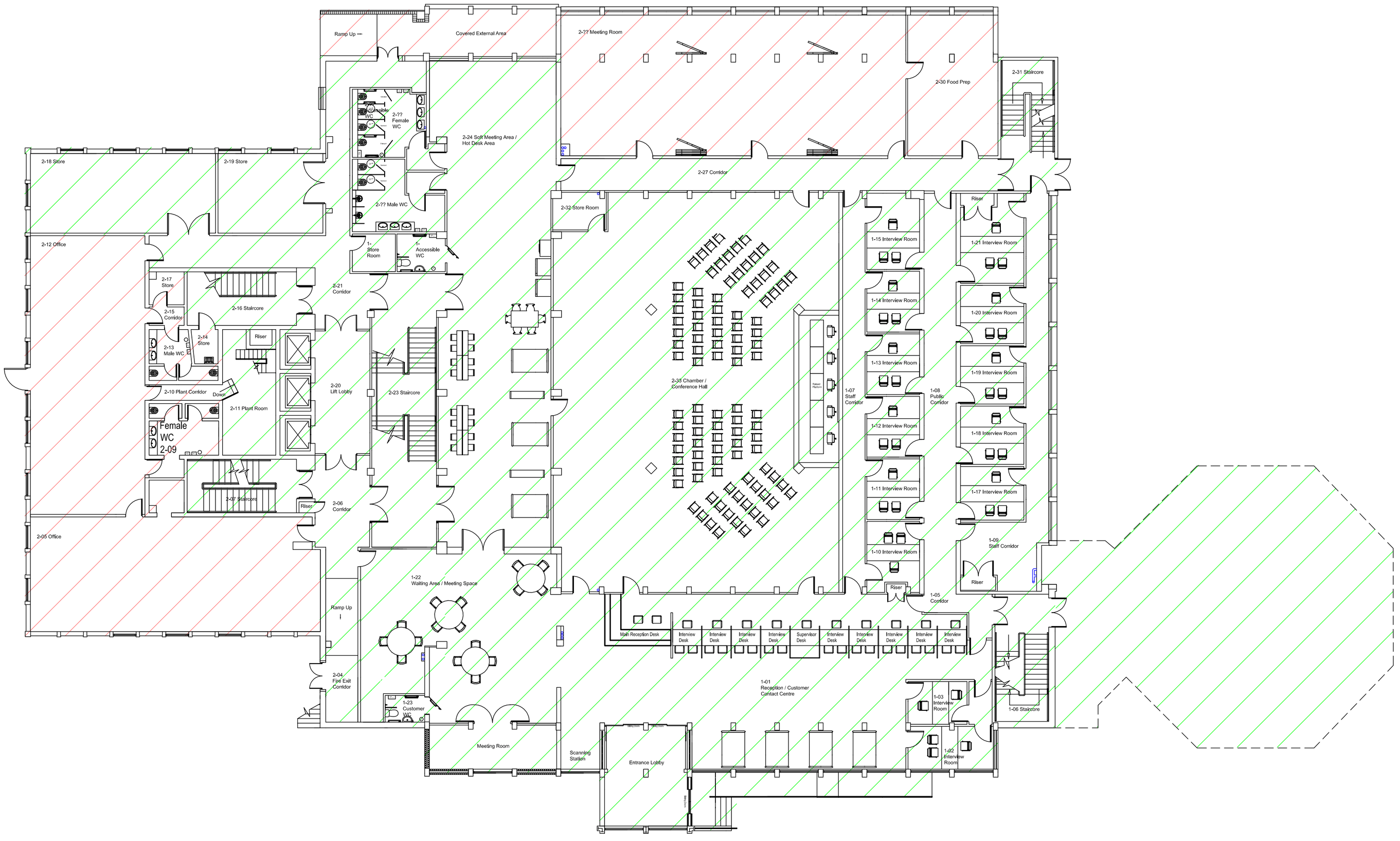

Key

- Essential Works
- Non essential works (mothballing)

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
06	General Arrangement Drawing	RK	DC	DC	22.01.18
07	General Arrangement Drawing	RK	DC	DC	24.01.18
08	General Arrangement Drawing	RK	DC	DC	26.01.18

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Project:

Civic Centre
Carlisle City Council
Flood Reinstatement

Drawing Title:

DRAFT
General Arrangement Drawing

Scale @ A1	Drawn	Date	Checked	Date	Approved	Date
1:125	RK	26.01.18	DC	26.01.18	DC	26.01.18

Project No.	Type	Drawing No.	Revision
A095945-3	BS	111 - 003	08

Our Ref: 5744/CS/EW
24th July 2017

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Dear Mark

CIVIC CENTRE – ROTUNDA – OPTIONS REPORT

Carlisle Civic Centre suffered significant flooding in December 2015. This was the second major flooding incident to affect the property in just over 10 years. The City Council, in common with many public bodies, has downsized significantly in recent years. After a period of much consideration, the City has determined plans for re-use of flood effected areas in the main Civic Centre building. Intentions for the re-use of the largely self-contained Rotunda remain under consideration.

Carigiet Cowen is instructed to provide high level commentary of options available.

Description
The Rotunda is currently the Council Chamber building between the Civic Centre and the Civic Centre Car Park. Accommodation is mainly on ground and first floor, with small galleried area to second floor. The first floor contains the Council Chamber, with viewing gallery over. The ground floor was put to ancillary use, together with toilet and canteen space. The building is an octagon in shape, of concrete frame construction under an assumed mineralised felt covered roof. The external walls are significantly glazed to all sides.

When used with the Civic Centre, lifts within the main building enabled disabled access to the first floor of the Rotunda. If the building is now considered in isolation, access is via steps only, with consequent disabled access issues.

Externally, the building adjoins the Civic Centre car park.

Areas

Ground floor	1500 sq ft	(139 sq m)
First floor	1500 sq ft	(139 sq m)
Second floor	724 sq ft	(67.27 sq m)

Issues

i) The Rotunda is currently put to a specialist use namely, Council Chamber. The Council are considering resiting within the main Civic Centre complex. The building lacks suitable access. The inflexible shape, and configuration of the Council Chamber is functionally inefficient, and thermal inefficiency mean the building is hot in Summer and cold in Winter. Exsiting access arrangements raise potential security issues. It is perhaps questionable whether the Rotunda remains fit for the purpose it was built.

ii) The building is an unusual hexagonal shape, glazed to all but two sides which will restrict potential alternative uses. The first floor, laid out for Council Chamber with terraced floor layout, in particular would be difficult to reuse.

iii) Potential alternative uses for the building might include meeting space, art gallery or studio, creche, or possibly a bar or restaurant. There are however other existing buildings providing such uses. The Old Fire Station nearby already is an established entertainment venue.

iv) The fact however that the subject property has now flooded twice in 10 years, will be a significant adverse consideration for any potential occupier, particularly if significant investment is being considered

v) When the Rotunda was in use with the main Civic Centre, disabled access was provided by lifts in the Civic. In isolation, the Rotunda has no lift. Access between floors is via steps. The access point at the north west side of the building is via a number of steps. Achieving disabled access regulation compliance will be difficult and potentially expensive.

vi) The construction of the building is such that it may be of poor energy efficient rating. The recent Energy Efficient Legislation (MEES) will restrict the let ability of inefficient properties.

vii) Following the 2015 flooding, the ground floor remains in shell form. The cost of reinstating the whole building is estimated as £100,000-£150,000, including the provision of toilets and new kitchen accommodation. In the course of the inspection of the property, it was noted that a number of the window units are in need of repair or replacement. This would be further expense.

viii) If the property is demolished, initial concepts indicate an additional 44 spaces could be created if the existing car park is remodelled to include the area of the Rotunda.

Options Review

1 Reinstate the accommodation

Pros

- A well-known property will be brought back into use.

Cons

- To bring the property into use, significant refurbishment and some alteration will be required.
- If the property is brought back into use for alternative purposes, significant adaptation of the Council Chamber will be required, at additional cost.
- Market demand from third party users is likely to be limited.
- Ongoing maintenance liability.
- History of flooding will adversely impact on occupier demand.
- Vacant space would be subject to potentially long void periods with the inherent business rates liability.

2 Demolition and Conversion to Car Parking

Pros

- Good demand for car parking spaces would be anticipated with a relatively secure income.
- Average per space income is approximately £1900 per annum, which compares favourably with contract car parking values achieved around the City which range from £650-£1760 per annum and other pay and display car parks. The provision of additional spaces at the Civic Centre should prove popular in the market.
- Such use could be readily brought back into use should any future flooding occur.

Cons

- Loss of well-known building.
- Cost of demolition and construction of new parking facility.

Rental Comparison

Alternative use - as already indicated, achieving alternative use is likely to prove difficult. However, in the event that the property is refurbished and marketed for such purposes, the rental which could be achieved is likely to be nominal. This may be in the order of £2-£3 per sq ft at most. The total rent is unlikely to be more than £10,000 per annum.

Creating additional car parking could generate approximately £80,000 of income. Data from occupancy and income on the car park to the south of the Civic Centre suggests this level of income should be more secure than letting floor space.

Conclusion

This Report provides a high level commentary on the options available to the City Council. Demand from third party occupiers for the Rotunda will be limited. Rental income will be uncertain, and if it can be achieved is likely to be at a nominal level.

Creating additional car parking would offer a number of advantages, it offers the maximum rental return from the space, the most secure income stream, minimises ongoing repair and maintenance liabilities, and the reinstatement liability will be minimised should future flooding ever occur. From a financial perspective this is clearly the most viable option.

Yours sincerely

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Outline Design Report

Carlisle Civic Centre – Flood Reinstatement

Prepared on behalf of:

Carlisle City Council

Issue 1
25th January 2018

WYG Management Services Limited. Registered in England & Wales Number: 04807864
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Document control

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Project:	Carlisle Civic Centre - Flood Reinstatement
Client:	Carlisle City Council
Job Number:	A095045-3
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Revision:	Issue 1	
Date:	25/01/18	
Prepared by: DAC, RW & AT	Checked by: DAC	Approved By: DAC
Description of revision: Issue 1 (Initial final)		

Contents

1.0 Introduction

1.1 Instructions

Further to the client's acceptance of our fee proposal dated June 2016, we have prepared an outline design for the repair and reconfiguration of Carlisle Civic Centre following the major flood in December 2015.

The client's brief for the project was that the proposed scheme for the project was that in addition to the repair of the flood damage, the ground floor of the building would be reconfigured to provide a welcoming and fit for purpose principal interface between the Council and the public. This meant that the building would be reinstated to incorporate the customer contact centre, formal and informal meeting rooms and the Council debating chamber.

The client also emphasised that we were required to build in a high level of flood resilience to enable the normal operations of the Council to resume as soon as possible following a flood.

A further primary objective of the scheme is to facilitate flexibility in the use of spaces such that the council might be able to generate revenue from other organisations.

The project will also address all disability and access issues including dementia.

1.2 Report Format

The building fabric element of this report presents the proposals for the repair and reconfiguration and describes the rationale upon which design recommendations have been based.

The mechanical and electrical engineering elements of this report are structured as brief descriptions of each building services design component, explaining the building services design principles and strategies. The primary objective of this document is to establish and explain the proposed design brief for the renovation of the Ground Floor and basement of the Carlisle Civic Centre

The aim of the building engineering services design is to provide a safe and comfortable building. The design should be energy efficient while maintaining the desired environmental conditions that afford the occupants and visitors a pleasant environment.

This report relates to the internal floor layout proposals as indicated on the drawings in Appendix A.

An indicative programme is provided in Appendix B

2.0 Building Fabric Proposals

2.1 General Description

The subject building is a concrete framed structure constructed in 1964 in an architectural style contemporary with the period. The columns to the perimeter of the structural frame are at relatively close 2.20m centres with the intermediate internal columns at about 7.00m centres.

The external walls to the ground floor level accommodation comprise precast concrete infill panels with a dry-dash aggregate external finish fitted within the structural frame. The inner section of the wall is mostly formed in lightweight concrete blockwork of very low density. It would appear that original external covered walkways have been infilled to increase the internal floor space.

The windows comprise aluminium framed double-glazed units with top hung opening vents.

The floor to the basement is a ground bearing concrete slab whereas the ground floor structure is formed in reinforced concrete of about 150mm thickness supported on a grid of primary and secondary beams

2.2 Stripping out

It is proposed that the residue of the suspended ceilings is removed which although unaffected by the floodwater, have been damaged by the strip-out of the M&E services. Similarly, all of the metal framed stud partitions and the non- load bearing blockwork partitions will be demolished.

The removal of the previous wall plaster to the areas of lightweight blockwork has damaged the masonry and several of the blocks and joints are severely cracked to the extent that 2/3 courses below window cill level are loose and unstable. We therefore propose that the full extent of the internal leaf blockwork is taken down and replaced

The former floor coverings have been removed and the underlying concrete floor exposed to facilitate the drying out process. The latex levelling screed that had been applied to the floor is in poor condition with extensive areas cracked and off-key. As part of the reinstatement project, the floor will need to be mechanically scabbled to form a sound substrate suitable for the installation of the new coverings. This will be a very noisy and dusty exercise and will be programmed to be undertaken as an out of hours operation to minimise disturbance.

2.3 External Walls

The reconstruction of the lower section of the external walls will present an opportunity to install a dense 7N/mm^2 blockwork that will provide a good level of flood resilience by being less prone to water absorption. The cavity in the walls will also be constructed to comply with current Building Regulation requirements and insulated with closed cell boarding to

provide improved thermal performance. This type of insulation material is recommended for its resistance to water absorption and therefore its ability to withstand flooding.

2.4 Windows

The new full height windows to the west elevation will be double glazed aluminium framed fixed light units with a polyester powder paint coating.

2.5 Ceilings

It is proposed that the Interview Rooms are provided with 600 x 600mm exposed grid suspended ceilings. The ceilings to the east side Interview Rooms will have enhanced acoustic and sound insulation properties appropriate for private meetings. It is suggested that the ceilings be set at a height of 2.60m

In some of the larger rooms, it is proposed to install acoustic rafts to reduce sound reverberation and ensure that the sound quality throughout is of a good standard. The entire building is going to be analysed by an acoustician as part of the detailed design process.

We would intend to specify a plasterboard on plywood ceiling to the Visitors' toilet as a security measure to prevent creating a potentially accessible void.

In corridors and other utility areas it is proposed that the concrete soffit is left exposed and painted matt black.

2.6 Internal walls and partitions

It is proposed that the new internal partitions will be formed in either fair-faced or standard 7N/mm² blockwork. The fair-faced partitions will be provided to the interview rooms with a three-coat paint finish. Generally, to the majority of the rooms, the walls will be plastered in a sand cement render and set that will be more resistant to water absorption and resilient to flood damage than the previously applied gypsum plaster.

As a cost saving measure, we would not propose that all the internal walls are built up to the underside of the first-floor structure and would be terminated just above suspended ceiling level. This will be considered by the project structural engineer during detailed design stage.

The corridor between the interview rooms is flanked by 200mm thick reinforced concrete load bearing walls which support the first floor and roof structures. It is proposed to penetrate these walls with 10 - 13 door openings and our structural engineer has advised that each opening is supported by means of a steel goal post frame to maintain structural

stability. Where possible, the existing door openings will be retained and utilised to maximise cost efficiency.

2.7 Floors and floor coverings

The existing clay tiles to the visitor waiting area appear to be soundly bedded and would be suitable for retention.

In the proposed meeting room and food preparation areas, some significant and pronounced unevenness is evident to the line of the inner columns parallel to the external wall. This will need to be addressed by localised feathering in with a specialist epoxy screed.

The main chamber / conference hall will be provided with a raised podium to the south wall. This will be a fixed element provided with 2 No 150mm high steps occupying the space between the new blockwork wall and the existing concrete columns.

It is proposed that the floor coverings will be a combination of sheet vinyl and contract quality carpet tiles of relatively low capital cost. Other hard coverings such as decorative screeds and ceramic tiles were considered but deemed unsuitable on grounds of cost. On the basis that a further flood is inevitable, we consider that these materials should be considered sacrificial and expendable in nature. Such coverings can be easily removed and replacements reinstated with a minimum of lead-in time.

2.8 Internal Joinery

It is proposed that the internal doors will be solid core paint grade hung in softwood frames such that when the building floods again the door leaves can be replaced at a relatively low cost compared to hardwood veneered doors. The softwood frames should also be salvageable in comparison to MDF which would swell and not recover.

The skirting boards and architraves will be similarly formed in softwood for their ability to dry out and recover their original shape and size.

2.9 Fixtures and fittings

It is proposed that the principal reception desk and the desks to the main customer contact centre will be formed in polished concrete to provide a good level of flood resilience and enable normal operations to resume in the short term following a flood. Opportunity will also be taken to ensure the reception desk addresses the requirements of the Equality Act with a lower area suitable for visitors in a wheelchair.

The counter to the main customer contact centre will be subdivided into bays which will be separated by opaque screens to provide visual and audible privacy. It will also be about

1.00m wide to provide a good level of separation between the council employee and the visitor to reduce the risk of physical assault.

The counters to the interview rooms will be 900mm wide and be formed in either laminated chipboard or Corian depending on costs and available budget.

In order to provide a flexible space that can be used for a number of different functions, it is proposed that the tabling on the podium be demountable whilst still evoking the requisite level of prestige.

Within the Chamber / Conference hall it is proposed to form a semi-secure demarcation line between the public viewing gallery and the councillors. We propose that this could be achieved by means of a demountable screen that could be bolted into the concrete floor. It could also be formed in lightweight aluminium as an aid to erection, dismantling and storage.

2.10 Sanitary Accommodation

The new sanitary fittings to the staff toilets will be white vitreous china components comprising wash down WC's with concealed cisterns and countertop wash basins set in laminated chipboard vanity units. The previously installed fittings have been set aside and as part of the detailed design process, an inspection will be carried out to determine if some can be re-used as a cost efficiency measure.

2.11 Entrance Lobby

The proposed entrance lobby is provided to reduce draughts in the reception / customer contact centre and also to provide a focal point to enable visitors unfamiliar with the building to find the main point of entry.

It is proposed that the architectural style of this extension would reflect the appearance of the existing building such that as the external envelope acquires the patina of age, it might appear as though part of the original construction. It is considered that this conservative

approach is the most appropriate as the building does seem to attract polarised opinions in respect of its appearance.

The entrance lobby is sized to ensure that the external distance to the existing planting bed does not create an unacceptable pinch point.

It is proposed that the inner and outer doors to the lobby will be automatic sliding glazed units activated by external and internal movement sensors. Adjacent manual doors will also be provided for the use of staff that might require out of hours access.

The majority of the lobby walls will be glazed to create a bright and airy ambience and also facilitate supervision from the reception desk.

2.12 Ground Floor Reconfiguration

The internal layout has respected the structure of the building and the load-bearing walls have, for the most part, been retained.

Where soil pipes and rainwater pipes pass through the ground floor accommodation from the building above, these have been retained and incorporated within the proposed layout to avoid any significant diversions.

A customer toilet will be provided in the north west corner of the visitor waiting area, which will be designed for disabled use.

The existing main entrance to the building on the west elevation is proposed to be converted into a semi-private meeting space. The external covered area will be infilled with new external wall construction, with full height windows similar to those installed in the customer contact centre. The existing external steps and ramp will be demolished as part of the project.

2.13 Basement

In the basement area, it is proposed that only minimum works will be undertaken commensurate with the limitation of fire spread which will entail the installation of several sets of fire doors at intervals ensuring compliance with the Building Regulations. The primary principle of the design is that the basement will be used solely for M&E plant and essential equipment and the design reflects this objective

2.14 Car Park Expansion

It is proposed to demolish the existing octagonal structure to facilitate the expansion of the carpark to create an additional 44 No. parking spaces. This demolition will include the existing link block which also encompasses the external fire escape stairs which will be re-modelled accordingly.

3.0 Mechanical Services

3.1 Design Criteria

The basis of design data is taken from the following documentation:

- British Standards, Codes of Practice and Building Regulations
- Design Guides i.e. CIBSE, IoP, BCO, etc. incl. Technical Memoranda (HVCA & BSRIA)
- Local and Statutory Authority Requirements
- Supply Authority Regulations

3.1.1 External Conditions

The external conditions that shall be taken from design calculations are as follows:

External Condition	Summer	Winter
Outdoor Design Temperatures	28°C db 20°C wb	-6°C (saturated)

Above figures are referenced from CIBSE Guide A data base for the closest geographical location.

3.1.2 Internal Design Conditions

The internal conditions that shall be taken for design calculation in various areas are as follows:

Area	Summer	Winter
Office Areas & Meeting Rooms	24°C ± 2°C (Humidity Not Controlled)	22°C ± 2°C (Minimum) (Humidity Not Controlled)
Toilet Areas	Not Controlled	20°C ± 2°C (Humidity Not Controlled)
Corridors and Circulation spaces	Not Controlled	20°C ± 2°C (Humidity Not Controlled)
Reception Area	24°C ± 2°C	20°C ± 2°C (Minimum)

Area	Summer	Winter
	(Humidity Not Controlled)	(Humidity Not Controlled)
Chamber	24°C ± 2°C (Humidity Not Controlled)	22°C ± 2°C (Minimum) (Humidity Not Controlled)
Break Out Areas	24°C ± 2°C (Humidity Not Controlled)	22°C ± 2°C (Minimum) (Humidity Not Controlled)
Plant Rooms	Not Controlled	Not Controlled
Supply Air Temperature Differential (to Room Air)	Maximum 10°K from room condition (supply air introduced outside of occupant zone) Maximum 3°K Temperature Gradient across Occupant zone (Between ankle and head height of seated occupant)	

Above figures are referenced from CIBSE Guide A.

The ± 2°C dry bulb allowance is provided as a control band tolerance and to allow for local variation in temperatures across rooms.

Where temperatures are shown these represent dry bulb air temperatures.

3.1.3 Internal Ventilation Standards

The internal ventilation standards that shall be taken for design calculation in various areas are as follows:

Area	Supply / Extract	Air Flow (l/s) min
Offices Areas and Meeting Rooms	Supply and Extract	10 l/s/person (supply)
Toilets	Extract	8 ac/h (Make up from office areas)
Corridors and Circulation Spaces	Not Controlled	Not Controlled
Reception	Supply and Extract	10 l/s/person (supply)
Break Out Areas	Supply and Extract	10 l/s/person (supply)
Chamber	Supply and Extract	10 l/s/person (supply)

Plant Rooms	Not Provided	N/A

Above figures are referenced from CIBSE Guide A and Building Regulations.

3.1.4 Acoustic Targets

Noise criteria for mechanical and electrical services plant shall be based upon the relevant CIBSE or BCO criteria.

The noise from mechanical and electrical services equipment shall meet the following criteria (Taken from CIBSE Guide A and BCO Fit Out Specification) when measured within the space at a position of 1500mm from any noise emitting source or enclosing structure, with finished ceilings and carpet in place.

Area	Maximum NR
Open Plan Office Areas	35
Circulation Areas	40
Reception Area	40
Toilets	45

Noise from external roof mounted plant shall not exceed the limits set out by Building Control.

3.2 Existing Mechanical Services

Following the assessment of the existing mechanical services its was found all low level services were irreversibly damage in the flood and require full replacement. Many high level services such as pipework and air conditioning systems had escaped flood damage. However, although some high level systems were not yet approaching the end of their economic life they no longer suit the configuration and demand of refurbished areas therefore a full replacement is required.

3.2.1 Heating Plant

The heating demand for the entire building is currently generated by 3No. gas fired condensing boilers installed in the basement plant room. The boilers and associated circulating pumps have been replaced/refurbished following the flood. These works were carried out approximately 2 years ago. As part of the ground floor refurbishment works the basement heating plant shall be retained and utilised to serve the Low Temperature Hot Water (LTHW) requirements of the project.

Proposed mechanical works within the basement shall include the re-provision of thermal insulation to the existing installed pipework. Existing thermal insulation has been removed

following flood damage.

In response to our client's instructions, we investigated relocating the boilers but this proved to be non-cost-effective.

3.2.2 Space Heating and Cooling

The ground floor of the Civic Centre pre-flood was primarily heated and cooled via a number of local Variable Refrigerant Flow (VRF) and Direct Expansion (DX) refrigerant-based systems. These systems consist of external condensers linked to internal units which locally heated and cooled the areas served to meet the demand for each individual space.

Back ground heating to some areas was provided via radiant panels and radiators served from the central LTHW system. These provisions are either damaged or no longer suit the configuration and demand of refurbished areas and therefore a full replacement is required.

Existing VRF and DX air conditioning systems serving the ground floor areas shall be decommissioned and removed in their entirety. Replacement provisions shall be developed and installed as part of the refurbishment works.

LTHW provisions serving the ground floor shall be traced, isolated, drained down and stripped out. LTHW provisions however shall be utilised as part of the refit to provide back ground heating to the reconfigured space. At each riser location pipework shall be modified to allow the extension of services to serve the new installation.

3.2.3 Ventilation Systems

Existing ventilation provisions within the ground floor area are minimal. Many areas rely on opening windows as the primary means of providing fresh air into the building, with the exception of the proposed Chamber area which has a dedicated air handler delivering minimum fresh air provision to internal spaces.

The toilet area adjacent to the existing entrance was provided with extract only ventilation via local ceiling mounted extract fans. The toilet area within the building core is provided with extract ventilation via the common toilet extract system which serves all floors of the tower.

These current ventilation provisions no longer suit the configuration of refurbished areas and demand falls short of current building standards. The full replacement and installation of ventilation systems shall take place as a part of the refurbishment works to bring the installation in line with current standards. Redundant systems shall be stripped out.

3.2.4 Domestic Water Services

Cold water services are gravity fed from cold water storage tanks located in the roof plant area of the building. Mains cold water services also distributed through the building to serve drinking outlets. Domestic hot water services are provided via local electric point of use water heaters.

Redundant domestic water provisions serving the ground floor shall be traced, isolated, drained down and stripped out. The existing domestic cold-water services infrastructure shall

however be utilised as part of the refit to serve new domestic water provisions. At each riser location pipework shall be modified to allow the extension of services to serve the new installation.

Within the basement there are redundant piped domestic water services. The existing domestic hot water services have been isolated and drained down and are completely out of services. However, the cold-water services appear to remain live. These cold-water services serving redundant outlets have created excessive dead legs within the cold-water system. Dead legs in the water system are a high legionella risk and should be address as soon as possible in line with the HSE Approved Code of Practice L8.

The dead legs are to be addressed as part of strip out works. When carrying out system modifications and associated strip out works relating to the project the contractor shall survey and trace domestic water services, isolate the affected areas and drain down to carry out works. Thereafter, cut back all redundant pipework as far as possible to the main branch source and modify to remove “dead leg”. Note capping off of fittings is not acceptable as small dead leg would be left.

Proposed mechanical works within the basement shall include the re-provision of thermal insulation to the existing installed pipework. Existing thermal insulation has been removed following flood damage.

3.2.5 Above Ground Drainage

A primary ventilated drainage system is currently installed internally to receive waste discharges from WCs, sinks, showers, basins, etc. The drainage stacks drop vertically through the building picking up drainage outlets from non-project areas above. As far as practicably possible the existing drainage infrastructure will be reused with modifications included as required to make new drainage connections. Existing soil and waste stacks will be retained following demolition works; these will be utilised as required to make new drainage connections.

3.2.6 Building Management System (BMS)

A redundant mechanical control panel (MCP) is located within the basement plant room, this provided overall control of the heating plant and domestic hot water system. Remedial works were carried out to retro fit a simple BMS on the heating system during its refurbishment two years ago. A PRIVA system was installed which provided basic monitoring and control of the heating plant from the Building Managers Front End via a network connection provided to the MCP.

A new controls installation and Building Management System (BMS) shall be provided to improve control and energy efficient running of the plant and equipment. The new system shall provide overall monitoring and control of the newly installed plant as well as integrate the existing functioning building services system, these include the Boilers, Primary LTHW

Pumps, Secondary LTHW Pumps, Weather compensating Valves, Toilet Extract Fans and Heating Zone Control Valves.

3.3 Heating, Ventilation and Air Conditioning (HVAC)

The HVAC strategy across the occupied areas of the Ground Floor refurbishment generally consists of local Heat Recovery Ventilation Units providing the fresh air requirements through the area served with VRF fan coil units providing local heating and cooling to the space served. In support areas such as toilets and circulation spaces back ground heating shall be provided by radiant panels served from the building existing LTHW heating system. The proposed Chamber shall be ventilated, heated and cooled via a dedicated air handling plant located on the first-floor roof.

3.3.1 Ventilation

The full replacement and installation of ventilation systems shall take place as a part of the refurbishment works to bring the installation in line with current standards. The building shall be ventilated to provide means of distributing fresh air throughout the building to maintain the required fresh air quality, required ventilation air change rates and to assist in controlling comfort conditions to meet the requirements of the space.

Through occupied areas (Reception, Meeting areas, Breakout area, Interview rooms and Offices) fresh air requirements shall be meet via ceiling mounted local heat recovery ventilation unit (HRUs). The HRUs shall incorporate a supply and extract fan section, filters, heat recovery and LTHW heating coils. The units shall be controlled to provide a constant supply volume tempered to temperature of 20oC, in winter conditions. In summer when internal temperatures and external temperatures allow the unit shall be used to provide an element of free cooling. Units shall be controlled on/off via BMS time clock.

The Chamber shall be ventilated, heated and cooled from a dedicated supply and extract AHU located externally on the first-floor roof. The AHU shall be in a horizontal configuration incorporating the supply and extract fan sections, filters, plate heat exchanger, DX heating & cooling coils and integral attenuation. Delivery of supply air into the space shall utilise the bulkhead around the chamber perimeter. The air distribution shall be designed to avoid drafts and stratification of the tempered supply air, this shall be achieved by utilising thermally actuated jet diffusers. The AHU shall be controlled to provide a constant supply air volume at varying air temperatures to meet the space demand. System controls shall be detailed by the employed control specialist to include time controls, interlocks, system initiations, frost protection, temperature set point control, extended run operation and failure detection.

The toilet, kitchen and large store areas shall be provided with dedicated mechanical extract only systems to maintain a negatively pressured space to remove moisture, odours and avoid the ingress of polluted air into adjacent area. Make up air shall be provided through direct supply from the air handing systems or from natural infiltration via inherent gaps around doors or installed door air transfer grilles. Mechanical extract ventilation systems shall be controlled on/off via BMS time clock in the MCP.

The ductwork shall route in the ceiling void or high level exposed. Ductwork shall be rigid

metal manufactured from zinc coated steel in accordance with HVAC DW144 and DW171. The ductwork shall be constructed to the pressure classification to suit the static pressure of the fans serving the system. Ductwork insulation shall be provided to ductwork carrying tempered air or recovered heat.

Plenum boxes shall be provided on all supply and extract grilles for connection of ductwork. All plenum boxes unless otherwise stated shall be painted matt black internally and insulated as per the connecting ductwork.

All ductwork passing through fire compartmentation boundaries shall be provided with fire dampers, these shall be rated to no less than the compartmentation they pass through. Unless otherwise stated, the fire dampers shall operate from a fusible link mechanism. Access doors shall be provided to enable the dampers to be reset without difficulty.

Balancing and commissioning accessories shall be provided to ensure the system can be balanced and commissioned as required. These shall be located for access through grilles or diffusers or located adjacent to access points. Volume control dampers (VCD's) shall be multi-blade or iris type.

All items of mechanical plant incorporating moving parts shall have appropriate vibration, isolation, couplings and mounts to ensure that vibration from the equipment is not transmitted to the building, other supporting structure, pipework or ductwork.

All external mechanical plant and fittings shall be weatherproof.

The supply louvres and cowls shall be fitted complete with anti-bird and insect mesh with extract louvres fitted with anti-bird mesh only.

3.3.2 Variable Refrigerant Flow (VRF) Systems

Occupied areas (Reception, Meeting areas, Breakout area, Interview rooms and Offices) of the project shall be provided with heating and cooling via a newly installed VRF system. The VRF installation consists of external condensers interconnecting with internal refrigerant-based heating/cooling fan coil units. The fan coil units shall be ducted ceiling concealed or ceiling cassette units. The units shall be sized to overcome anticipated heat gains from occupant, lighting, installed equipment and solar gains within the space. The units shall be controlled to deliver cooling and heating as necessary via the conditioning of recirculated air to satisfy the room set point conditions.

The installed VRF system shall be the 3-pipe reversible heat pump type providing independent heating and cooling to all rooms served. This system shall be capable of simultaneous heating and cooling areas from the installed common VRF system allowing free heating recovery via the transferring of heat from areas requiring cooling.

The fan coil units shall connect to heat rejection condensers which shall be located externally at first floor level within the external gantry. There shall be a number of VRF condensers serving the VRF fan coil system within the project, each condenser shall be monitored for fault by the BMS.

The installed refrigerant pipework shall take cognisance of the anticipated phasing strategy.

By installing capped control boxes at each moth balled zone of the building the refrigerant installation can extended simply without the need for full recommissioning of the entire system.

The VRF installation shall be controlled by the manufacturers proprietary controls. A wall mounted controller shall be installed for each room/zone served (master/slave where applicable), each controller shall be capable off limiting temperature set points and locking modes to meet the client's requirements. Ceiling concealed units shall be provided with return air temperature sensors.

Areas, which are served by two or more fan coil units, shall be configured to operate as a signal master with the remaining fan coil units, configured as slaves.

The fan coil units shall generally be enabled and disabled by a manual command at the room controller. However, a BMS fixed time schedule shall be applied to limit the operation between the occupied hours to avoid the system being left on overnight where appropriate. An individual fault signal (via field wiring/relays etc) for all VRF installation equipment shall be connected to the BMS operator's station.

The selection of refrigerants shall also be carefully considered in terms of future anticipated requirements for refrigerants and ozone depleting chemicals. Minimal content for refrigerants within the occupied spaces, and precautions for leak detection where internal routes are necessary in accordance with EC Regulation on Certain Fluorinated Greenhouse Gases.

Pipework shall generally be in copper. All refrigerant pipework shall be insulated with Nitrile Rubber and provided with a continuous vapour barrier. Insulation shall be continuous, ensuring all pipework connections to be fan coils and condensing units are covered. All refrigerant pipework shall be installed, tested and commissioned in accordance with manufactures recommendations.

Full access shall be provided to the valves and maintainable fittings within the distribution system.

Each indoor unit is to be provided with condensate lift pump for the disposal of condensate via plastic pipework. Condensate from each fan coil units shall discharge to local drainage stacks or rain water down pipes via gravity or pumped system via a waterless trap. For pumped systems condensate shall collect in a drip tray with a submersed pump operating based on water levels. The condensate pump shall be monitored by the BMS.

All pipework shall be installed complete with fire stopping sleeves at fire compartmentation boundary walls and floor slabs, as necessary.

All items of mechanical plant incorporating moving parts shall have appropriate vibration couplings to ensure that vibration from the equipment is not transmitted to the building, other supporting structure, pipework or ductwork.

All external mechanical plant and fittings shall be weatherproofed.

3.3.3 Heating

The occupied areas of the building shall generally be heating and cooled via the installed

VRF system described above. Unoccupied and support areas will be provided with back ground heating via radiant panels served from the existing LTHW infrastructure. The existing LTHW system shall also be utilised to provide pre-heating of the fresh air provision via the HRUs.

The existing building is heated via an LTHW heating system, the LTHW plant is located within the basement. The existing LTHW system includes a constant temperature flow primary circuit comprising 3 no. in line condensing boilers, low loss header, controls, valves and fittings. The boilers have individual primary circulation pumps. The primary LTHW heating plant is designed to provide a water flow temperature of 82oC flow 71oC return.

The existing LTHW distribution system comprises a primary/secondary pumping system with a low loss distribution header. The primary section of the heating system circulates water through the boiler and low loss distribution header.

The secondary heating system circulates water from the low loss distribution header through either a variable temperature (VT) LTHW circuit or a constant temperature (CT) LTHW circuit. There are 3 no. LTHW heating circuits which distribute heat through the building which can be summarised below:

- Variable temperature (East) – Serving Radiators and Radiant Panels in the East orientation of the building.
- Variable temperature (West)– Serving Radiators and Radiant Panels in the West orientation of the building.
- Constant temperature – Serving heating fan coils throughout the building.

The secondary systems circulate water with a water flow temperature of 82oC and a return of 71oC at full load. Each secondary pump sets are single head pumps in duty/standby arrangement. The variable temperature system is installed with 3-port mixing valves on the main return for weather compensation.

The existing heating pipework rises through the building from the basement via the riser in the central core and via the 2 no. decentralised risers. LTHW circulating circuits then distribute horizontally in the ceiling void to serve the heat emitters on each floor.

The works on the ground floor will include the appropriate isolation, reconfiguration and recommissioning of the existing local heating infrastructure to serve the proposed installation. Within the works the ground floor the existing LTHW heating installation will become redundant, all equipment will require to be isolated and removed.

New LTHW service branches will be installed utilising the existing rising mains. It will be necessary to mechanically isolate the LTHW mains serving the ground floor, drain the affected lengths of the circuit and remove existing pipework and heat emitters whilst maintaining continuity of flow through the site. If local isolation points are not available then the contractor will drain the section of the system and cut the sections of pipe and install isolation valves, to enable works to proceed.

The new LTHW installation shall follow the strategy of the existing. The existing VT circuits shall be modified at the riser location to serve radiant panels within support areas and the

existing CT circuit shall be modified at the riser location to serve heating coils of the newly installed HRUs. The new pipework will be sufficiently sized to provide the heating demand for the new heating requirements. This new pipework branches once installed can be utilised to allow the installation of new services with minimal impact on existing services.

New pipework runs shall route at high level in the ceiling void to serve heating coils and radiant panels as described above.

Support areas, corridors, toilets and shower rooms will be heated using LTHW radiant panels recessed into the suspended ceiling. Each radiant panel will be individually controlled using a 2-port control valve via room thermostat. Radiant panels will be coordinated with all other ceiling surface fixed equipment.

Each HRU installed to provide fresh air provisions through the ground floor shall be provided with a LTHW heat battery to provide temperature control to the supply air. Each heat coil will be controlled using a 3-port control valve via supply air temperature sensor.

The contractor shall include for all necessary requirements in order to isolate services which are to be worked on within the area of work being carried out and make provision as to maintain services to areas outwith the area currently being worked on.

The system shall tie into the existing LTHW infrastructure; as such, the contractor shall require to ascertain water quality samples and provide test result to the CA prior to any work commencing. The report to the CA must include a summary of the findings and recommendations with regards to the application the water is serving.

Full survey and trace of existing services is required prior to isolation and demolition of existing services within the works. Implication of existing services isolation and modification affecting services out with the of works being carried out must be advise to the contract administrator.

Prior to any work commencing on the existing LTHW system, the contractor will trace the heating system and prepare commissioning figures to confirm the existing flow rates to all existing areas, LTHW equipment and plant affected by the works and ensure that these figures can be maintained through the works and at the end of the works for the retained parts of the common systems. Where measuring and commissioning devices on the existing system are not available, or existing sets are damaged, the contractor will install new ones in order to carry out the required works. This must be carried out and commissioning figures provided to the contract administrator.

Upon completion of works the heating distribution system is to be rebalanced to achieve the required flow rates for the new plant, and to confirm that the original flow rates to the retained plant are met. This will include identifying the pump set associated with the LTHW distribution and adjusting the effective flow rate as required to meet the requirements of the project. Should this require rebalancing around other areas of the building then this will be carried out and commissioning figures provided to the contract administrator.

As part of the works, the contractor will install air cocks on the new high sections of pipework to enable air to be released from the circuit and drain points on low sections. Isolation and commissioning valves will also be provided as required.

As far as practicably possible, services outwith the area being carried out will remain live. The contractor will advise the contract administrator of any downtime required of the services within the works being carried out. This shall be minimised by out of hour working where appropriate.

All LTHW pipework shall be medium grade steel. Fittings shall be those compatible with the manufactures pipe system.

Pipework passing through structural movement joints shall be subject to a degree of movement. The M&E contractor shall ensure this movement is allowed within the installation of the fixed services. A specialist supplier shall be engaged to check the approved installation drawings to assess the movement requirements

All pipework shall be concealed in ceiling voids with full access provided to all valves within the system.

All control, commissioning, and isolation valve shall be provided to meet the requirements for balance, commission and operate the installation.

All pipework shall be installed complete with fire stopping sleeves at fire compartmentation boundary walls and floor slabs, as necessary.

All LTHW equipment shall be fully co-ordinated by the Mechanical contractor with other services and details.

The entire LTHW system shall be fully flushed, cleaned and chemically dosed prior to completing the project to current BSRIA standards

3.4 Domestic Water Services

The proposed refurbishment will utilise the existing domestic water infrastructure, which distributes through the site. Within the building, the domestic water distributes vertically through the risers and distributes horizontally in the ceiling void. The domestic water services also rise locally at basement level to serve some ground floor areas.

It is the intention to utilise this existing infrastructure to serve the reconfigured spaces. The existing domestic cold-water services only will be modified at appropriate locations to install new service branches to serve the refurbished area. Existing domestic hot water services are currently redundant can be removed in their entirety.

The domestic cold-water services will be isolated and modified at the existing riser location and within the basement level as required to serve the reconfigured spaces.

When pipework modifications are carried out or existing services removed it will not be acceptable to leave any dead legs in pipework.

Domestic hot water shall be generated in each area via unvented hot water point of use electric heaters. The units shall be provided with the manufacturers unvented kits including expansion vessel on the cold-water feed. The temperature and pressure valve relief exhaust on each water heater shall be so piped to discharge via visible tundish in a downward

position to prevent a potential scalding hazard in accordance with Building Regulation Approved Document G. Bends shall be slow radius.

Domestic hot water temperature shall generally be controlled by the thermostat in the hot water heater. The hot water storage temperature shall be set to 65°C. Hot water storage temperature set point shall adjustable via the thermostat. The water heater shall be provided with an integral thermal cut off which will prevent overheating and dry starts.

All hot water outlets shall have lockable and adjustable thermostatic mixing valves installed as near to the source of draw off points to minimise the risk of Legionella. All wash basins shall have the thermostatic mixing valves set originally at 41°C. The cleaner's sinks shall have no thermostatic mixing valves and shall display "danger hot water" signs in the sink area.

Local electric point of use water boilers shall be provided to the break out space and tea point area for tea/coffee making. These shall be located above the sink or provided with drip tray. The water boiler shall be provided with all the necessary isolation, safety valves, and expansion vessels as per manufactures recommendations.

The existing domestic cold-water services will be modified to distribute new service branch to serve the refurbished area. These works will include identifying suitable isolation points in the existing system and localised drain down of the affect areas of the circuit. If local isolation points are not available then the contractor will drain the affected sections of pipe and install isolation valves, to enable works to proceed.

The new pipe branches will be sufficiently sized to provide water for cold demand for the reconfigured area.

Where existing branches are isolated these branches shall be affectively removed leaving no dead legs.

The contractor shall include for all necessary requirements in order to isolate services which are to be worked on within the area of works being carried out and make provision as to maintain services to areas outwith the area currently being worked on.

A full survey and trace of existing services is required prior to isolation and demolition of existing services within the works. Implication of existing services isolation and modification affecting services out with the works being carried out must be advised to the contract administrator. As far as practicably possible, services outwith the area being carried out will remain live. The contractor will advise the contract administrator of any downtime required of the services within the works being carried out. This shall be minimised by out of hour working where appropriate.

It is the intention to connect to the existing main domestic water pipe runs, it is not the intention to replace existing main pipe infrastructure. A condition survey will be carried out as part of the contractor design process to determine if this represents a risk or hazard to the water systems.

Pipework passing through structural movement joints shall be subject to a degree of movement. The M&E contractor shall ensure this movement is allowed within the installation

of the fixed services.

Isolation valves will be provided on branches serving individual rooms or groups of rooms. Local servicing valves will be provided at each appliance. All connections to appliances will be in rigid pipework.

Full access shall be provided to valves and maintainable fittings within the distribution system. Means of isolation shall be quarter turn rotating ball isolating valves installed at all connections to sanitary appliances, taps, or other outlets. Each branch shall be fitted with a stop cock and drain tap.

All hot and cold-water pipework within the building will be potable water grade copper. All pipework will be provided with thermal insulation by aluminium foil face mineral fibre insulation.

All pipework shall be installed complete with fire stopping sleeves at fire compartmentation boundary walls and floor slabs, as necessary.

The entire domestic water services system shall be fully cleaned, dosed and disinfected prior to completing each phase of the project. Recorded details of this process and water test results are to be provided before each phase is handed over.

The contractor shall provide a chlorination test certificate.

Water quality testing of the water supply will be completed prior to connection and provided to the CA.

3.5 Above Ground Drainage

A primary ventilated drainage system is currently installed internally to receive waste discharges from WCs, sinks, showers, basins etc. across the project area and through the building. The drainage stacks drop vertically through the building picking up drainage outlets from non-project areas above. As far as practicably possible the existing drainage infrastructure will be reused with modifications included as required to make new drainage connections. Existing soil and waste stacks will be retained following demolition works; these will be utilised as required to make new drainage connections.

These works will include a survey and identification of existing local drainage stacks and infrastructure, to which the new above-ground drainage pipework can connect. Any new drainage stacks created will drop to below and offset within the basement to connect to the existing drainage infrastructure. The offset pipe runs will be installed with appropriate fall and cleaning eyes at change of direction.

Ventilation of the new drainages stack shall be provided by modification and connection to the existing ventilation pipework and terminals where practical. Certified mechanical air vents may be used in locations where restraints prohibit the re-use of naturally aspirated vents. Air admittance valves shall set above the flood level of the highest fitting and connect to the stack within the suspended ceilings. Full access shall be provided to all air admittance valves allowing acceptable entry for maintenance purposes.

Discharge pipes will be installed internally to receive waste discharges from new WCs, sinks, basins and equipment. Discharge branches are to be separately connected to the stack. All soil and waste connections to sanitary fittings and waste appliances will be trapped. Traps will be accessible and provided with adequate facility for cleaning. Pipe branches will be laid to gradients as recommended in BS EN 12056-2:2000. Anti-siphon traps complete with refill priming nipples will be fitted to all wash hand basins and sinks

Full access will be provided to all fittings allowing acceptable entry for maintenance and cleaning purposes. Full details of concealed pipework routes requiring boxing and access points will be coordinated with the architect.

Branch discharge pipes serving sinks, wash hand basins and other appliances will be kept as short as practicably possible to reduce both self-siphonage and accumulation of sediment. Branches will have individual connections to stacks and sub-stacks.

An access fitting will be installed at the base of each new stack, 600 mm AFFL. Additional rodding / cleaning access points will be provided on pipe work at changes of direction, soil junctions and at the ends of trunk wastes receiving the discharges from two or more fittings. Cleaning eyes will also be installed at the end of waste branches.

The drainage risers and vents will generally be located within IPS panels for example within the dedicated toilet areas, wash hand basin stations etc.

Slow radius bends will be installed at the foot of the new stacks as the system connects to the existing infrastructure.

The full co-ordination and setting out of the penetrations through the floor slab shall form part of the Mechanical contractors' works.

Condensate pipework shall be provided from the internal fan coil units. Condensate pipework shall have a fall of at least 1:100 and shall terminate at internal waste stacks with waterless traps.

The mechanical contractor shall install un-vented water heaters in accordance with the Building Regulations and manufacturers instruction and shall ensure that the hot water discharge from safety devise is safety conveyed to where it is visible but will not cause danger to persons in or around the building. Copper branch connections will be provided on all appliances with high temperature discharge.

The entire drainage system shall be hydraulically tested prior to completing the project. All pipe work will be installed complete with fire-stopping at fire walls and floor slabs as necessary.

Non-return valves are to be fitted to the drainage system. The contractor is to trace and survey the system to ascertain chamber locations where these are to be fitted.

The contractor shall take cognisance of the building services serving areas out with those being worked on and include for all necessary requirements in order to isolate services which are to be worked on and make provision as to maintain services to areas outwith the area currently being worked on.

It is the intention to connect to the existing mains drainage stacks, it is not the intention to replace existing infrastructure however, a condition survey is to be carried out to inform if this represent a risk or hazard to the system.

As far as practicably possible services outwith the area of works being carried out shall remain live. Full survey and trace of existing services is required prior to isolation and demolition of existing services within the area of works. Implication of existing services isolation and modification affecting services out with the phase of works being carried out must be advise to the contract administrator. The contractor shall advise the contract administrator of any down time required of the services within the works being carried out

3.6 Building Management System (BMS)

A Building Management System (BMS) shall be provided throughout to control and monitor all newly installed equipment as well as existing installed mechanical services.

The controls shall be provided for the central BMS facility to adjust individual set-points, time programmes and record the energy consumption of each system. The BMS controls installation shall include all system interlocks and functions including system initiations, plant protection sequencing, frost protection, optimum start/stop, weather compensation, extended run operation, failure detection, plant rotation/sequencing, pump overrun etc.

Local control shall be provided where appropriate for the adjustment of set point and extended run operation.

Head end control and monitoring shall be provided from an operator's workstation in the Buildings Managers Office.

The contractor shall employ an accredited controls specialist to design, supply and install a complete and fully functional controls system as described throughout the project specification to provide control for the mechanical plant and equipment associated with project.

A complete set of logic diagrams, detail descriptions of systems and proposed graphics shall be provided by the controls specialist during the design phase for approval by the Services Engineers.

The BMS system shall be provided within a mechanical control panels (MCP) located in the first-floor electrical switch room. The MCP shall provide the control to the mechanical plant associated with the project, power shall generally be provided locally. A separate MCP shall be provided for the Chamber AHU plant which shall be utilised to provide all power and control to the associated plant.

MCPs will house one or more BMS outstations linked to the BMS communications network and be complete with all necessary switches, pushbuttons and indication lamps, including a lamp-test pushbutton mounted on the panel doors.

Within each MCP shall be a single 13A RCD protected socket outlet to provide a power source for a laptop; plus a spare BMS communications port to allow the laptop to be connected to the BMS network. Each shall be complete with BMS display keypad through

which the outstation can be interrogated.

The contractor shall provide all controls required to achieve the controls functionality as specified and as shown on the drawings and submit a functional description of the control philosophy and detailed points list for approval.

4.0 Electrical Services

4.1 Design Criteria

The electrical engineering design will be developed in accordance with the following standards and regulations, along with all current statutory legislation: -

System	Standards
General	Building Regulations British Standard Specifications and British Standard Codes of Practice BSRIA Technical, Application Guides and Commissioning Guides CIBSE Design Guides, technical reports / memoranda and commissioning codes Construction, Design and Management Regulations Health & Safety Regulations Local Authority Building Inspector requirements Local Authority Bylaws, regulations and notices
Electrical Distribution	BS:7671 IEE 17th Edition Wiring Regulations Electricity Supply Regulations 1992. Requirements of the Health and Safety Executive under the Health and Safety at Work Act. Requirements of the local Electrical Authority
Lighting	SLL Code for Lighting CIBSE LG3 Visual environment for display screens use CIBSE LG7 Office Lighting EN 12464 Part 1 European Standard for lighting of workplaces
Emergency Lighting	BS:5266 Emergency Lighting CIBSE TM 12
Telecoms and Data	BS 6701 Telecommunications Equipment and Telecommunications Cabling BS EN 50173 Information Technology – Generic Cabling Systems BS EN 50174 Information Technology –Cabling Installations
Security Systems	BS:8220 Guide to the Security of Building Against Crime NACP 30
Fire Alarm	BS:5839 Fire Detection and Alarm Systems The Disability Discrimination Act

System	Standards
	BS:5588 Fire precautions in the design, construction and the use of buildings Code of Practice EN 54 Requirements of local Fire Authority
Lightning Protection & Earthing	BS:7671 IEE 17th Edition Wiring Regulations BS:7430 – Code of Practice for Earthing BS EN 50310 Equipotential Bonding and Earthing in Buildings with Information Technology Equipment.

4.1.1 Flood Resilience

As the Civic Centre will undoubtedly flood sometime in the future, the new electrical services will, where possible, be installed to minimise damage. Where this cannot be avoided, the installations will be as simple as possible, to facilitate quick replacement.

4.2 Existing Electrical Services

The existing Electrical services within both the Basement and Ground Floors shall, generally, be removed in their entirety. This will include all temporary supplies, currently installed to enable access to the basement area, including power supplies to pumps and boilers. Within the Ground Floor, undamaged existing containment may be reused, providing it is of adequate size and capacity for the intended installation.

The following items will be retained as described.

4.2.1 Incoming LV Power Supply

The incoming Low Voltage (LV) power supply enters the building within the basement switchroom. The cables terminate in a large isolator, which was installed to enable the main LV switchboard to be lifted to the first floor, out with the flood plain. There are no planned alterations to the current arrangement.

4.2.2 BT Telecom Cables

The incoming telecom cables enter the building within the basement "old telecom room". These cable terminations have been modified to withstand being submerged in water, with the outgoing cables rising to the ground floor ceiling spaces, before onward route the first-floor telecoms cabinets. The quality of the support structure of these existing cables is variable and additional containment will be installed to rectify this issue.

4.2.3 Access Control

Within the Ground Floor area, a limited number of doors are still operated via the access control system. These doors and their associated controls and power supply units will be

maintained throughout the project. New equipment will be installed as part of the works and the specialist contractor will co-ordinate the changeover to meet client requirements.

4.3 Low Voltage (LV) Infrastructure

The LV installation enters the building within the Basement Electrical switch-room, terminating in a large 400V 3-Phase isolator. This in turn serves the main LV Switchboard, which was relocated to the first floor, to minimise future flood damage. The LV switchboard shall be retained, with new sub-mains cabling installed to serve the refurbished areas. Spare ways will be retained to serve future, mothballed areas.

The main switchboard will supply the following via sub-main cabling:

- Section board at strategic locations, which in turn will serve local distribution boards
- Final circuit distribution boards
- Mechanical control panels
- Packaged Air Handling Units
- Lifts (Existing)
- Fire alarm panel (Existing)
- Security panel (Existing)

Sub-metering will be provided, external to the main LV switchboard, to monitor energy consumption of all outgoing ways serving any section boards, distribution boards (serving lighting circuits), mechanical services and loads over 50kW.

4.3.1 Sub-mains distribution

Sub-main cables will emanate from the main LV switchboard to serve section boards, distribution boards and fixed loads. Sub-main cables will be of XLPE/SWA/LSF construction. Sub-main cables supplying life safety systems will be of CWZ/fire rated construction.

The sub-mains cabling will be sized to supply the dedicated load with an allowance of 25% spare capacity above base load.

Section boards will comprise of wall-mounted MCCB panel boards with integral MCCB or isolator for incoming device.
All section and distribution boards will be surface mount, of mild steel construction with epoxy powder coating and of IP4X ingress protection.

All spare ways will be provided with a suitable blank plate and each board will be provided with a circuit schedule / chart or 'tally card'.

Each new section and distribution board will be lockable and strategically positioned throughout the building to serve the electrical installation.

4.3.2 Distribution Boards

Separate or split final circuit distribution boards will be used to supply the general lighting and power circuits. A separate distribution board will be provided to supply mechanical services power circuits. The boards will be strategically located to supply different areas of the building and housed within lockable distribution cupboards, risers or store rooms, wherever possible.

All distribution boards will be surface mounted and provided with miniature circuit breaker (MCB) protection. Each board will be labelled to indicate the areas and the equipment served. All boards will be provided with a lockable door with all door locks having the same key for ease of maintenance.

Each outgoing circuit will be provided with a dedicated circuit breaker, with the following characteristics:

i) General power circuits – type B
ii) Lighting circuits – type C
iii) Circuits protecting a motor – type D

All MCB's will generally be rated with a fault breaking capacity of 15kA.

4.3.3 Earthing and Bonding

Earthing will be provided in accordance with the BS 7671, IEE Wiring Regulations, 17th Edition and comply with BS 7430.

The main earth bar is located within the existing Basement switchgear room.

No works are planned to the existing earthing installation, however new works will include earthing to:

i) Ventilation ductwork
ii) Each heating circuit pipework
iii) Cable containment
iv) Data services

On completion of the works, the earthing installation will be tested in its entirety.

4.4 Containment

The primary distribution routes in the Ground Floor will, where possible, be concealed within the ceiling voids in circulation corridors and office spaces. Where no ceilings are installed, the containment will provide an "industrial" finish to the space.

Low level containment will be provided to the main Lobby / Reception desk; however, no floor mounted containment will be provided. This will avoid lengthy remedial works in the event of another flood.

Within the Basement, minimal containment will be provided to serve the life safety systems installed.

All multiple sub-main cable runs will be installed on heavy duty galvanized steel cable tray, supported from the building fabric. Single sub-main cable runs will be clipped/cleated direct to the building fabric, using proprietary clips / cleats.

Cable trunking will be used to distribute the principle routes of the building services systems wiring, where appropriate to the scope of works. This will generally be within the ceiling voids of corridors and rooms or above acoustic rafts.

Cable basket, medium duty, will be utilised to distribute data / telecom, fire alarm, security & access control cabling.

Cable containment and cable types are noted as:

System	Cable Containment	Cable Type
Sub-mains Distribution	Cable Tray (Heavy Duty)	Armoured cables with copper conductors, low smoke and fume emission sheath (XLPE/SWA/LSF)
Lighting and Small Power	Cable Trunking (Galvanised)	Singles in trunking / conduit; cables with low smoke and fume emission sheath
Fire Alarm	Cable basket or tray for multiple cable runs. Fixed direct for up to two cables.	"Firetuff" cable with protection to BS6387 CWZ classification and low smoke and fume emission sheath.
Security and Access Control Systems	Cable basket or tray	To suit the manufacturers requirements; low smoke and fume emission sheath

4.4.1 Dado trunking

Within interview rooms and general office areas, dado trunking will be installed to facilitate a rapid replacement in the event of flood.

The arrangement of the dado trunking will suit the proposed use of the space, whilst taking account of future replacement. For instance, within interview rooms, the trunking will be installed vertically from the ceiling. An isolator at ceiling level will enable local isolation of the trunking, in the first instance, and thus easier replacement, should it become flooded.

A similar arrangement will be employed within office / meeting spaces.

4.5 Lighting and Emergency Lighting installation

The lighting installation will provide general, emergency and security lighting, as appropriate with the scope of works. In all cases, LED Luminaires will be utilised to minimise maintenance and improve energy efficiency. Limiting luminaire types will be employed to minimise spares and again assist with future maintenance

In rooms where the ceiling finish is to be the exposed structure, suspended LED linear or modular system will generally be used. In rooms where a suspended ceiling is to be provided recessed direct / indirect luminaires will generally be used. The luminaires will also provide a good spread of illumination across the ceiling and towards the walls which helps to create a good lighting environment.

The following outlines typical average levels of illumination to be provided:

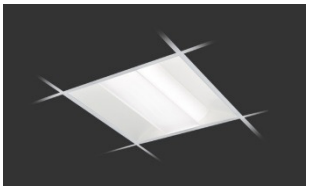
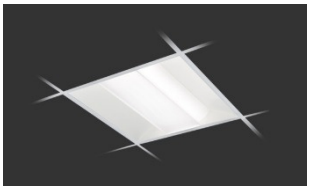
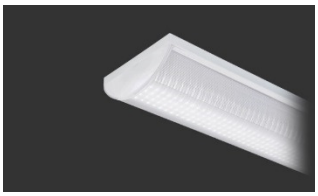
Area	Working Plane	Typical Average Lux Level at the Working Plane
General Public Spaces	Desks	300 - 500 (Max. glare index of 19)
General Office Spaces	Desks	500 (Max. glare index of 19)
Chamber / Conference	Desks	500
Casual Meeting Room	Desks	500
Interview Rooms	Desks	500
Food Prep	Worktop	500
Stores	Floor	100
Plant	Floor	150
Entrance Lobby	Floor	200
Corridors	Floor	150
Toilets/changing areas	Floor	200

The lighting levels stated above are typical, specific levels for all rooms are detailed on the room data sheets. Lighting levels will comply with CIBSE guidance.

The generic types of luminaries are tabulated below. Wherever possible, these will be system integrated with the architecture. Therefore, where suspended 'lay in grid' ceilings are to be provided and it is practicable, recessed luminaires will generally be used. In areas where a

suspended plasterboard ceiling is to be provided the luminaire type will be assessed based on a room by room basis to suit the application. In areas where the ceiling type is exposed structure, a suspended linear or modular system will generally be used.

The following outlines typical areas and the lighting system generally to be provided:

Area	Ceiling Type	Description of Luminaires proposed
Interview Rooms / Office Spaces	Exposed Structure	Suspended LED luminaire c/w & high frequency control gear. 
	Suspended Ceiling	Recessed LED luminaire c/w high frequency control gear. 
Stair cores	Surface mounted (to match existing)	Shallow profile surface mounted luminaires with co-extruded 'Satin-Glo' polycarbonate controller and integral presence detector. 

Basement	Surface mounted	Robust and durable luminaires with a choice of polycarbonate or acrylic cover. Extruded aluminium body with die-cast ends. Long life silicone sponge gasket ensuring IP66 rating. 
Lobby / Meeting / Corridors	Recessed	Recessed luminaires with injection moulded reflector finished white. Open, louvre and IP65 versions available. Accessories include green tinted halo and IK10 polycarbonate cover. 
WC's / Showers	Recessed	Recessed luminaires with injection moulded polycarbonate body housing with high efficiency remote phosphor mixing chamber. IP44 version available. 
Chamber / Conference Area	Suspended	Extruded aluminium trunking is connected to a range of luminaire modules. These modules can be a combination of luminaire, emergency luminaire, spotlight and passive infra-red detector. 

The luminaires have been selected from the Thorlux Lighting range.

4.5.1 Emergency Lighting

Emergency lighting will be provided to allow safe egress from the building, under mains or local circuit failure conditions, as appropriate within the scope of works.

Emergency lighting will be provided to comply with:

- BS EN 1838
- BS 5266
- CIBSE LG12

The following areas will be provided with emergency lighting:

- All escape routes - principally corridors and staircases
- Areas over 60m^2
- Rooms that receive no natural daylight
- Toilets that are more than 8m^2 or are accessible toilets.
- Areas containing potentially hazardous equipment, e.g. plant room & kitchen.

The emergency lighting system will be arranged to provide the following minimum illumination levels as follows:

- Escape routes – minimum of 1 lux along the centre line and 0.5 lux over a 1m central band
- Anti-panic and open area lighting (areas over 60m²) – minimum of 0.5 lux anywhere in the area

The installation shall form a complete emergency lighting system, comprising associated containment systems, fixed final circuit wiring, lighting connection modules, plug-in ceiling roses, flexible cables, luminaires, lamps, controls and support systems.

Where possible standard luminaires, converted for emergency use have been selected; where this is not possible, self-contained, non-maintained emergency luminaires will be installed. Emergency luminaires will be non-maintained, self-contained, self-test luminaires of three-hour duration. Batteries will be nickel metal hydride (NiMh) type and wired to achieve operation on sub-circuit failure.

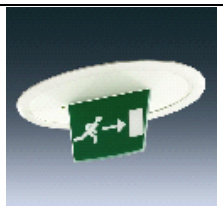
Self-contained maintained illuminated exit signage will be provided to highlight all escape routes and final exit doors on escape routes.

The emergency lighting system will indicate clearly and unambiguously, all escape routes; internally and externally as required, provide luminance along such routes and immediate external areas of escape routes, so as to allow safe movement towards and through all exits,

ensure that the fire call points and fire-fighting equipment provided along escape routes can be located, when the normal lighting has failed.

Testing will be facilitated using simple emergency lighting test key-switches, located adjacent to local distribution boards. Illuminated exit signs, where required, will comply with the European Safety Signs Directives. Photoluminescence exit signs will be provided where no alternative is practicable.

Indicative emergency luminaire types:

Area	Proposed luminaire	Proposed luminaire description
Store rooms, plant rooms		Non-Maintained, Surface mounted LED bulkhead, with protective enclosure, c/w prismatic diffuser and high frequency control gear
Exit doors (suspended ceilings)		Maintained, edge-lit emergency sign, white finish, with single sided legend panel.
Corridors and Public Areas		Non-Maintained, recessed LED emergency luminaire; narrow and open plan optic
External Exits		Maintained, IP66 Surface mounted LED bulkhead, c/w prismatic diffuser and high frequency control gear

All emergency luminaires will be suitably selected to be compatible with the environment in which they are installed.

4.6 Lighting Controls

In order to comply with current building regulations and minimise energy wastage, automatic lighting controls will be employed wherever possible. These will take the form of

daylight dimming, presence and absence detection. In a limited number of areas manual switching will be retained.

4.6.1 Daylight Dimming Controls

Each space that contains sufficient glazing will be provided with a flexible, effective "Lighting Control System", incorporating absence / presence detection, with daylight monitoring and dimming, accordingly, with main switch control to the door.
Areas provided with the full lighting control package will be identified, within the room data sheets.

4.6.2 Automatic Controls

Areas with insufficient or no glazing but still requiring an effective "Lighting Control System" will be provided with absence / presence detection. This will include interview rooms, corridors, store rooms etc.

Areas provided with absence / presence detection will be identified, within the room data sheets.

4.6.3 Manual Controls

Manual switching will be utilised in areas where automatic controls may not be suitable. These will generally be limited to plant and food preparation areas and will consist of standard grid switch type units.

4.7 External Lighting

External lighting is currently provided to one face only of the main façade. The introduction of the new entrance and ramped access will require additional external and emergency lighting.

The proposed luminaire is in keeping with the existing installation and will include integral emergency control gear, where necessary.

Area	Wall Type	Description of Luminaires proposed
External Façade	Exposed structure	IP66 wall mounted luminaire. Die-cast aluminium body with a choice of high efficiency glass or polycarbonate refractor as Thorlux Realta 

The external lighting will be controlled via solar dial time clock and photocell.

4.8 Small Power installation

Small power outlets will be provided in accordance with the room data sheets and as appropriate to the intended use of each space. Where possible, the installation will take account of the potential future flood risk and be suitable for prompt replacement.

In line with current regulations, all small power circuits serving socket outlets will additionally be provided with Residual Current Circuit Protection (RCCD). Each circuit will be provided with combined MCB/RCD units, which will have a 30mA tripping characteristic.

Socket outlets will be standard 13A type to BS1363.

4.8.1 Basement outlets

A minimal number of small power outlets will be installed to provide power to the existing mechanical services equipment i.e. gas fired boilers, LTHW pumps, sump pumps etc.

Final connections to the equipment will generally be via rotary isolator of industrial socket e.g. MK Commando or similar. The cabling supplying these outlets will emanate from a new Basement distribution board, mounted at high level within the ground floor.

4.8.2 Interview Rooms

The interview rooms require minimal small power outlets, mainly used to serve any IT equipment utilised by staff. To enable these to be replaced quickly, in the event of flood, the outlets will be mounted on the vertical dado trunking.

4.8.3 Office areas

Provision of small power within the office areas will be in line with room data sheets. Again, to assist with flood reinstatement, these will generally be mounted on dado trunking.

4.8.4 Council Chamber / Conference area

The Council Chamber / Conference area is a multi-use space that requires maximum flexibility. It is intended that the Council Chamber will operate wirelessly, with no hard-wired outlets required. As a Conference space, a substantial number of wall mounted socket outlets will be provided, to facilitate the proposed conferencing aspirations. No floor mounted outlets will be provided, as again these would be compromised in the event of flooding and would be costly to install in the concrete floor.

4.8.5 Cleaner's sockets

Single socket outlets will be installed throughout the project for cleaning purposes only. A maximum distance of 15 metres between two cleaner's sockets will be applied.

4.8.6 General outlets

Within the Ground Floor any ancillary items requiring power e.g. door access control, mechanical services, vending machines, fire alarm interfaces etc. will, where possible, be ceiling mounted and provided via switch fused connection units. Depending on the equipment rating, these will either be connected as a 32A ring main or as a single radial circuit.

4.9 Fire Alarm installation

The fire alarm installation within the Basement and Ground floors will integrate into the current installation, covering the multi-storey office and temporary detection within the ground floor. The existing fire alarm panel will be retained, although subject to a minor relocation e.g. raised to high level. A repeater panel will be provided within the new main Lobby / Reception area, to ensure rapid identification of any fire condition.

The installation within the Basement will be designated type L3, covering main escape routes and rooms providing a higher risk level. Sufficient fire separation works, including doors, will be provided to ensure adequate division between the Basement and other floors.

The Ground Floor installation will be designated type L1, covering all areas on that floor.

Both floors will be installed in accordance with BS: 5839 Part 1 and the designations will be confirmed with the Fire Officer and Fire Engineer.

The complete system will be designed in accordance with Fire Officers, Building Control and Insurers' requirements. The system will include:

- Manual call points
- Multi criteria detectors incorporating sounders and flashing beacons
- Separate sounders and beacons within plant areas
- Magnetic door holders in all corridors (where required by BS 8300)
- Interfaces with mechanical plant shut down
- Interfaces with access control system for safe egress
- Interface to shut off all gas supplies
- Fire alarm repeater panels where required / appropriate

The fire alarm will be raised by the means of the multi criteria heads, with in built electronic sounders located throughout the floors. In plantrooms where ambient sound levels are high and areas such as toilets, flashing beacons will be provided, where appropriate.

Facilities will be provided to allow the fire alarm system to be regularly tested without operating specific interfaces, such as the gas shut off valve and the mechanical systems.

The fire detection and alarm system will be linked to an approved remote manned monitoring centre.

In order to match the existing installation, all equipment will be supplied by GENT / Honeywell.

4.10 Access Control System

A new Access Control system will be provided to the Ground Floor area only, which will be compatible with the existing control system currently in place throughout the remaining building. Access will be gained by presenting a card / fob to a proximity reader. On the non-controlled side of the doors, egress will be by simple mushroom headed green push or, in the event of an emergency, green break glass.

In the event of an incident, the council have advised that the entrance / lobby area should be capable of being "locked down" i.e. no access to back of house staff areas, without the required pass. To this end, all doors from the entrance / lobby area will be under access control.

Additional doors within the Ground Floor will also be under access control, namely access to the central stair core and proposed back of house / telephony office.

The meeting rooms within the main entrance lobby will have access controlled doors that can be remotely released from the customer service counter. This will provide a secure room that can only be access by the public, once permission has been granted. Egress from the rooms will have the same pushbutton / break glass arrangement as elsewhere on the floor.

Staff will use current fobs with the new installation but where additional fobs are required these will:

- Carry a unique number
- Be able to be cancelled immediately if lost
- Be able to be programmed and produced on site

In the event of a confirmed fire all access control doors will fail "safe" and unlock.

4.11 Security installation

A new intruder alarm system will be provided to both the Basement and Ground floors, to monitor for unsolicited intrusion.

The intruder alarm system will comply with: BS EN50131-1: BS 8243:2010+A1:2014 and PD 6662(2017) and conform to current ACPO (Association of Chief Police Officers) alarm policy. The system will be installed to NSI Gold Standard.

The system will employ sequential detection methods for verification of the alarm.

The system will comprise of the following:

- Dual technology detectors, having a narrow confinement beam of operation within corridors and wide beam in other areas with perimeter glazing.
- Door contacts to all external doors will monitor the state of doors during normal working hours and monitor forced entry outside normal working hours. They will be set into the door framing. Door contacts will be capable of 'door open' indicators when alarm is unset.

In addition to the detection devices, the systems will be fitted with internal and external audible warning devices, designed to operate in the event of all alarm activations. The external units will also include flashing strobe effect warning lights which, when operated, help aid the identification of the warning sound source.

A new auto dialler for offsite monitoring will be installed as part of the works.

4.12 CCTV installation

A CCTV surveillance system will be provided to monitor the buildings public reception and internal circulation spaces, along with final entry / exit points. No coverage will be provided within interview rooms, meeting rooms or offices. A separate, non-security-based CCTV system may be provided within the Council Chamber, as part of the audio / visual package.

No additional external cameras will be provided as part of this project.

The outputs from the cameras will be recorded to hard disk on a 16channel digital recorder located in the equipment rack, with storage capacity of 600Gb and complete with multi-screen display.

A CD writer will be provided.

A 19", 18u (or similar) high lockable equipment rack will be provided for the CCTV control equipment. This will be mounted within the proposed first floor IT / cabinet room, to ensure no damage is caused by future flooding.

The system will be a PC based Digital Surveillance System (DSS) offering digital recording, remote camera viewing access, video archiving and multi-camera display. Other features to be included are password protection, continuous scheduled and motion detection recording and auto-dial to both fixed and mobile telephones. A storage capacity of 48 hours will be provided at a recording rate of 9.5FPS.

Internal cameras will be fixed dome cameras and provided as detailed on the room data sheets and as per the specialist contractor's proposals.

During building operational periods, the system will be programmed to constantly monitor specific areas, where staff and visitors enter and exit the building. During non-operational

periods the system reverts to pre-determined tours with the facility to monitor specific areas in relation to the security alarms status.

The systems network capabilities will allow connection to either LAN or WAN via PCs provided with the systems viewing software.

Control of cameras will be on a 'first come first served' basis meaning that the first person to take control of the camera will retain control until they release control. However, the video from the camera can be viewed by others, who will not be able to control the camera.

Power failure will generate an alarm to the monitoring station and / or key holder.

The CCTV System will be linked to the Access Control and Intruder Detection Systems to ensure doors being used give real time CCTV coverage.

The CCTV Cameras and hardware proposed are of prosecution quality.

4.13 IT installation

The IT installation for the Ground Floor will emanate from new racks located on the First Floor. A (previous) storage cupboard has been identified as the preferred location and new, skeleton cabinets are already in place.

The IT installation will be cabled in Cat 6 cable, matching the current installations and capacity. The installation will consist:

- Cabling to be carried out in accordance with the manufacturers' recommendations.
- Cabling to each outlet shall be by Category 6, Unshielded Twisted Pair cable. Cable used must comply with ISO/IEC 11801-1:2017 and subsequent revisions.
- Cables at outlet points to terminate in dual RJ45 outlets with Krone IDC connections. Connectors must comply with ISO/IEC 11801-1:2017 and subsequent revisions.
- Cables at communications cabinets will terminate on Krone IDC connections on RJ45 patch panels.
- The numbers of data outlets being installed are included in the room data sheets.

4.13.1 Communication cabinets

The existing skeleton 42u cabinets will be utilised to house the new racks.

Sufficient patch panels, compatible with Category 6 UTP cabling and presenting RJ45 outlets, should be provided within each cabinet. Patch panels must be certified to ISO/IEC 11801-1:2017 (and subsequent revisions) specification.

A cable management panel will be fitted top and bottom, in addition to below every second patch panel.

An internal 12-way power distribution strip will be fitted in the free space area to allow

powered communications equipment to be supplied internally via 13Amp three pin sockets. A cooling fan tray will be mounted at the top of the cabinet.

4.13.2 General

All active network equipment and telephone equipment will be provided and installed by Carlisle City Council. All incoming communications lines including connection to WAN will be arranged by Carlisle City Council.

4.14 Audio / Visual provision

4.14.1 Council Chamber

Carlisle City Council have indicated that, ideally, they wish to upgrade their audio / visual equipment within the proposed council chamber. The equipment would include wireless communications, voting system, meeting broadcast facilities etc. Elements of this equipment e.g. wireless communications, would also be utilised during conferences.

To that end we have approached specialist suppliers to confirm equipment lists and obtain an estimate of costs.

4.14.2 Meeting Rooms

Wall mounted TV panels will be installed within meeting rooms, as an alternative to projection screens. It is envisaged these will provide wireless connectivity, avoiding the need for various hard-wired connections, to all devices, including laptops and tablets. This will enable TV panels to be easily removed and taken to safety, in the event of a flood warning being issued.

Power and data outlets will be provided at high level for connection to the TV panels.

The TV panels will be supplied directly by Carlisle City Council.

4.14.3 Breakout / Gathering spaces

Wall mounted TV panels will be installed, at high level, within breakout / gathering spaces to provide general information services. Power and data connections will be provided at high level for connection to the panels. This will enable TV panels to be easily removed and taken to safety, in the event of a flood warning being issued.

The TV panels will be supplied directly by Carlisle City Council.

4.15 Installations for Disabled Persons

The following installations will be provided to assist persons with additional requirements, either working in or visiting the building.

4.15.1 Disabled Alarm

All disabled toilets and washrooms will be provided with a disabled alarm system. The system will include local initiation devices, local flashing alert beacon with integral sounder and local reset facility. All disabled alarm systems shall be linked to a master control and indication panel located in the Reception Panel, with a repeater control panel in the Keeper's office.

4.15.2 Induction Loop System

An induction loop system will be provided in accordance with BS 7594. Coverage will be provided in the following locations: -

- Reception Counter
- Customer Service Counter
- Council Chamber / Conference space

In addition, portable induction loops will be provided for the individual meeting rooms. In the first instance, a total of four mobile units will be provided. All aids will be located within the main reception for use by any personnel or visitors.

4.16 Lift installation

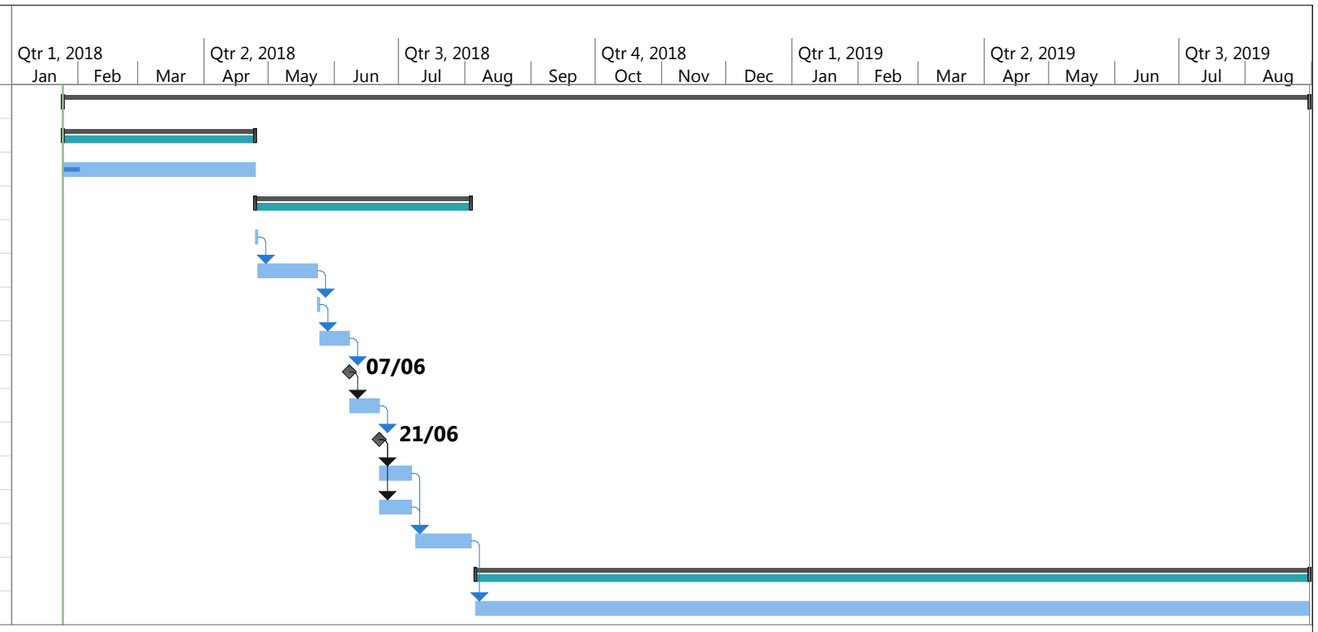
No additional works are planned on the existing three lifts.

End of Outline Design Report

Appendix A

General Arrangement Drawing

ID		Task Mod	Task Name	Duration	Start	Finish	% Complete
1			**111 - Civic Centre**	**417 days**	**Thu 25/01/18**	**Fri 30/08/19**	**1%**
2			**Design (BS & M&E)**	**64 days**	**Thu 25/01/18**	**Tue 24/04/18**	**9%**
3			Detailed Design & Tender Documents	64 days	Thu 25/01/18	Tue 24/04/18	9%
4			**Tender Action**	**73 days**	**Wed 25/04/18**	**Fri 03/08/18**	**0%**
5			Issue to Client for Chest Upload	1 day	Wed 25/04/18	Wed 25/04/18	0%
6			Tender Period	20 days	Thu 26/04/18	Wed 23/05/18	0%
7			Download from Chest to WYG	1 day	Thu 24/05/18	Thu 24/05/18	0%
8			Tender Report	10 days	Fri 25/05/18	Thu 07/06/18	0%
9			Issue Tender Report	0 days	Thu 07/06/18	Thu 07/06/18	0%
10			Approvals	10 days	Fri 08/06/18	Thu 21/06/18	0%
11			Contract Award	0 days	Thu 21/06/18	Thu 21/06/18	0%
12			Contract Preparation	11 days	Fri 22/06/18	Fri 06/07/18	0%
13			Stand Still Period	11 days	Fri 22/06/18	Fri 06/07/18	0%
14			Lead In Time	20 days	Mon 09/07/18	Fri 03/08/18	0%
15			**Construction Phase**	**280 days**	**Mon 06/08/18**	**Fri 30/08/19**	0%
16			Construction Period	280 days	Mon 06/08/18	Fri 30/08/19	0%



Project: A095945-3_111 Civic C
Date: Thu 25/01/18

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

EXCERPT FROM THE MINUTES OF THE EXECUTIVE HELD ON 12 FEBRUARY 2018

EX.17/18 CIVIC CENTRE – GROUND FLOOR FLOOD REINSTATEMENT
(Key Decision – KD.34/17)

Portfolio Finance, Governance and Resources

Relevant Scrutiny Panel Business and Transformation

Subject Matter

The Deputy Leader, and Finance, Governance and Resources Portfolio Holder submitted report GD.11/18, the purpose of which was to update the Executive on the final proposals for the reinstatement of the Civic Centre.

Those included: a new entrance, reception area and customer contact centre; a new Council chamber and conference facilities, open meeting space for Council staff and partners, additional storage space, office units for potential new partners, toilets and other ancillary accommodation. The redesign of the ground floor would seek to improve customers, partners, members and staff usage of the entire site. The work would resolve the current poor access arrangements to the Chamber by bringing that facility to ground floor level. The work would also follow good practise on design for physical access, dementia, sight and hearing loss across the property.

The report also finalised proposals for an extension to the Civic Centre public car park.

In terms of background, the report recorded that since the last report (CS.21/17) and with the approval of the Executive, work had continued to complete final design details and costs for the development. Those built upon the initial design and costs, and sought to provide a clear and realistic set of proposals which would be used to tender the project in April 2018.

Details of the building proposals in respect of the ground floor accommodation; further ground floor considerations; timescales; and partnership proposals were set out at Section 2 of the report.

Subject to Member approval of the proposals, the next steps would be:

- Final approval of budget
- Undertaking a tender process
- Resolution of any planning issues
- Award to the contract
- Completion of the build process

The Deputy Leader, and Finance, Governance and Resources Portfolio Holder then formally moved the recommendations.

The Leader emphasised that the reinstatement proposals formed another important part of the programme in terms of how the Council would work in future. He was supportive of the recommendation that the views of the Business and Transformation Scrutiny Panel be sought and looked forward to receipt of their comments as part of the democratic process.

The Leader concluded by formally seconding the recommendations.

Summary of options rejected none

DECISION

That the Executive:

1. Had reviewed the final layout and design proposals contained within Report GD.11/18, both for the ground floor reinstatement and the other plans for the entire site.

2. Had reviewed the final arrangements for funding the development, using the Council's insurance settlement, capital programme and the proposed 'invest to save' initiative as included within private Report GD.11/18.

3. Approved the acceptance of the insurer's offer in full and final settlement of the insurance claim.

4. Sought the views of the Business and Transformation Scrutiny Panel (22 March 2018) before finalising recommendations to full Council (24 April 2018)

Reasons for Decision

The December 2015 floods created an opportunity to remodel the Civic Centre to provide a facility that is fit for purpose, not only for the City Council, but also for a number of partner organisations. Providing a one stop centre for information and assistance for the citizens of Carlisle. The proposals also offer opportunities to create additional revenue streams for the City Council and reduce operating costs