BOND BRYAN

FUTURE TECHNOLOGIES CENTRE, JUNCTION MILLS, BRADFORD COLLEGE

DESIGN AND ACCESS STATEMENT

BCCTF-BBA-JM-ZZ-RP-A-0013-P03 (File Ref: 21030)
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REPORT ISSUE TABLE

Purpose of Issue	Status	Revision	Date	Prepared By	Checked By
Draft for review	S2	P01	30.08.2023	KR	RN
Planning (Note: Not submitted)	S2	P02	06.09.2023	KR	RN
Planning	S2	P03	18.10.2023	KR	RN

FUTURE TECHNOLOGIES CENTRE, JUNCTION MILLS, BRADFORD COLLEGE

DESIGN AND ACCESS STATEMENT

CONTENTS

THE SCHEME CREATES AN EXCITING OPPORTUNITY FOR THE COLLEGE TO CREATE A HIGH-QUALITY TEACHING AND LEARNING ENVIRONMENT WHILE CONTRIBUTING TO THE URBAN REALM AND LOCAL COMMUNITY.

1.0 INTRODUCTION & CONTEXT

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DESIGN & ACCESS STATEMENT

1.1 INTRODUCTION / PURPOSE OF THIS REPORT

This Design and Access Statement sets out the architectural design intentions for the proposed new Future Technologies Centre located on Bradford College's Great Horton Road campus as developed to meet the College's vision and brief.

The design of the proposed centre has been developed in conjunction with Bradford College and its advisors up to RIBA Stage 3, 'Spatial Co-ordination'. The proposals to date represent an important milestone in terms of agreeing a fixed design, in preparation to move to technical design, and give the College a level of certainty over the viability of the proposals suitable for a detailed planning application submission.

This report sets out the process undertaken, the key drivers and decisions taken, and the details developed to formulate the proposals meeting the College's vision within the urban realm and contextual setting.

Elements discussed in this report are to be read in conjunction with all drawings / documentation included in the submission.

To support the design development and ensure statutory compliance the following surveys and strategies have been developed and documented:

Land Contamination Assessment (Phase 1 SI)

Preliminary Ecological Appraisal including Biodiversity Survey and assessment

Ecology Management

Bat survey

Flood Risk Assessment

Noise Impact Assessment

Air Quality Assessment (exposure assessment)

Security Needs Assessment

Breeam Assessment

Heritage Statement

Thornton Road

Transport Statement

Demolition Strategy

Architectural / Landscape Drawings / Strategy

Substructure and Superstructure proposals

Drainage Strategy

Building Services Strategy

Fire Strategy

Acoustic Strategy

Travel Plan

Documentation to support the application and to be read with the Design and Access Statement is listed in section 7..

Moving forward:

- Surveys & Investigations - Post demolition, more intrusive surveys of ground conditions, to inform the structural and drainage solutions etc. that have not been possible to date due to the presence of the existing building.
- Sustainability & BREEAM - Undertake a further evaluation of the emerging proposals to improve energy performance and sustainability, and further test the design is on target for Breeam Very good.

1.2 PROJECT SUMMARY & TEAM

Located on Bradford College's Great Horton Road campus the proposed Future Technologies Centre project comprises demolition of an inflexible building in a poor state of repair, and construction of a high-quality new build to provide dedicated facilities to support the needs of Automotive and Engineering curriculums, within the curtilage of the main College campus.

- Creation of a new build facility, approx 3000m2 over four floors, to accommodate automotive and advanced engineering provision.

- Supporting development of training and skills for new technologies across the automotive and engineering industries, including the move to electric and hybrid technologies.

- Enabling the College to demolish the existing condition category D Junction Mills building and vacate the existing poor quality more remote leased Bowling Back Lane facilities currently used for automotive training.

The works are part of the wider strategy for the College's estate to improve the estate condition, improve spatial efficiency and create specialist facilities to support the delivery of Higher Skills.

Project Team:

- Project & Cost Manager - RLB
- Lead Designer, Architect & Landscape - Bond Bryan
- Building Services Engineer - Couch Perry Wilkes
- Structural & Civil Engineer - Curtins
- Principal Designer (CDM) & Breeam Assessor - RLB
- Fire Engineer - Bureau Veritas
- Acoustic Engineer - Apex Acoustics
- Ecologist - RSK
- Planning Consultant - Urbana

1.3 KEY PROJECT DATA

- Gross Internal Floor Area: 3,019m2.

- Building Height: 4 storey building plus rooftop access and plant area, with external terrace at third floor.

- 5550mm ground to first floor in order to provide minimum clear height in workshops of 4300m2 for the use of vehicle lifts.

- 4050mm upper floors.

- Column free zones at Ground floor level to support automotive workshop need.

- Planned Student Demand: Approx 650 students are planned by 2024/25 with around 8200 teaching hours per week.

- Proposed Teaching Space: The Stage 2 brief anticipates the creation of around 1950m2 of teaching and learning space.

Existing Junction Mills building - To be demolished

1.4 KEY DESIGN DRIVERS

- Demolition - Junction Mills building is poor quality (category D) accommodation in a poor state of repair, with key structural issues, asbestos and contamination. The inflexible internal arrangements are not ideally suited for automotive use with open plan and high areas required.

- New Build - Provide efficient high quality long lasting accommodation to support curriculum need and advancing technologies.

- Maximise Ground floor - The building footprint makes maximium use of the site to maximise the ground floor facilities.

- Location - The position of the building allows the facilities to be part of the broader campus, making use of the available supporting facilities.

- Environmental considerations - A building design to meet acoustic, air quality, and ecological need to suit context and function.

Proposed Future Technologies Centre - Visualisation (BBA)

1.5 ESTATE STRATEGY / BACKGROUND

As one of the major education and training providers in the region, Bradford College offers a broad curriculum to around 10,000 students. The College has long recognised that the estate has an important role to play in supporting the mission "to create a better future for all through education and training" and to the vibrant heart of Bradford itself.

Over the last 10 years the College has been implementing an estate strategy focused on delivering a series of new build and refurbishment projects in order to improve the quality and efficiency of its estate to meet the changing needs of the FE & HE sector. This has included the construction of the new build David Hockney Building (2014) and ATC building (2015), as well as some refurbishment and alterations to improve the accessibility /suitability of the retained Victorian Lister Building.

The work completed since 2013 to improve and rationalise the estate has achieved a number of significant goals:

- Reducing the overall scale of the estate occupied by the College from around 85,000m2 to 59,000m2.
- Consolidating provision from 19 buildings across the city to 10, predominately focused on 2 campuses.
- Removing over 50,000m² of poor quality condition category C buildings, reducing the quantity of category C buildings from around 88% of the GIFA in 2010, to around 35% of the current estate.
- In doing so improving space utilisation and reducing estates costs.
- Significantly reducing the energy/carbon footprint of the College's estate.

Remaining Challenges – Suitability and Condition

Whilst the work to date has delivered major benefits to the estate, the estate strategy identified a number of key challenges that remain to be addressed:

- Building Condition. The College remains in occupation of 21,200m² of condition category C/D buildings; the leased Bowling Back Lane Automotive centre, the historic Lister Building, the largely mothballed Garden Mills Building and the currently vacant category D Junction Mills building.
- Learner Experience. The Automotive provision at Bowling Back Lane and Apprenticeship provision are currently located in small facilities remote from the main campus buildings, limiting access to core student support and learning facilities and reducing the ability to timetable these spaces effectively.
- Meeting Future Skills Needs. Isolated from the College's other STEM facilities, the existing Automotive provision at Bowling Back Lane is focused on traditional skills, with facilities poorly suited to meeting the changing needs of the automotive industry and future engineering technologies.
- Operational and Estate Liabilities. Due to the condition and suitability of Junction Mills and the smaller Garden Mills the College has sought to minimise use of these for teaching and learning, however they remain a maintenance and security liability for the College and a positive use needs to be sought for them.

Proposed Estate Strategy 2021-2026

The College has regularly reviewed and updated its Estate Strategy to respond to the changing curriculum needs, skills priorities, and the latest update was undertaken in the spring of 2022. This considered the needs of the college over the next 5 years and identified a number of core priorities:

- Improving the condition of the estate - seeking to upgrade or replace the remaining category C and D buildings.
- Seek to make further improvements to the space efficiency of the estate.
- Respond to the key local, regional, and national skills needs - in particular the rapidly changing needs of the automotive, engineering and construction sectors to meet the challenges of decarbonisation and move to digital technologies.
- Enhance the student experience, including strengthening the identity of the HE provision.
- Reduce operational running costs and reduce the College's Carbon footprint.

A range of strategic options to meet these needs have been considered and a preferred approach has been identified. This has highlighted a number of packages of works to deliver high quality, fit for purpose facilities whilst minimising disruption and maximising value for money. This includes a mix of refurbishment and new build projects that provide a flexible framework that can be developed to suit changing curriculum needs and funding opportunities.

Garden Mills -

Work is currently underway to refurbish and remodel the Garden Mills building enabling an underutilised asset to be converted into a high quality learning facility. This is being used predominantly for academic curriculum need supported by social and study areas that can be suitably be supported within the constraints of the existing building.

Junction Mills / FTC -

The proposed new Future Technologies Centre (FTC) will form a key part of the estate strategy, replacing the existing poor condition inflexible Junction Mills building, and locating a new high quality suitable facility centrally. The FTC is envisaged as a new centre for automotive, engineering and digital skills training to replace outdated facilities currently housed at the more remote leased Bowling Back Lane site, supporting curriculum need and adaptable to changing industry need.

Junction Mills

Garden Mills

Lister Building

Trinity Green

Victoria Building

ATC Building

David Hockney Building

Old Building (Vacated)

GREAT HORTON ROAD CAMPUS

TRINITY GREEN CAMPUS

Change in Floor Area (m2)				
Building	201314 Position	2017/18 Position	2020/21 Position	2024/25 Proposed
David Hockney Building	0	24,000	24,000	24,000
Lister Building	10,150	10,150	10,150	10,150
ATC	0	3,580	3,580	3,580
Trinity Green	8,920	8,920	8,920	8,920
Bowling Back Lane	2,040	2,040	2,040	0
Garden Mills	2,915	2,915	2,915	2,915
Centenary Square	380	380	380	380
Little Germany Building	2,900	2,900	2,900	0
Junction Mills	3,200	3,200	3,200	0
Victoria Building	1,140	1,140	1,140	1,140
Appleton	5,900	0	0	0
Old Building	13,000	13,000	0	0
Westbrook	10,000	0	0	0
Kent	6,100	0	0	0
Grove	3,480	0	0	0
McMillian	8,460	0	0	0
Merton Road	230	0	0	0
Russel Street	480	0	0	0
Farnham Rd	600	0	0	0
Barkerend	1,150	0	0	0
Bolton Royd	4,400	0	0	0
Proposed New Future Technologies Centre				3019
Sub Total	85,445	72,225	59,225	54,104

Google

1.6 BENEFITS OF THE FTC / SCOPE

The proposed new Future Technologies Centre offers value for money and delivers a range of benefits:

- Replacing 5,200m2 of category C and D accommodation (Bowling Back Lane and Junction Mills), with c3,019m2 of high quality, energy efficient Category A new building.

- Creation of high-quality flexible teaching and learning spaces tailored to meet the future needs of the automotive and sustainable transport industries, in line with regional and national skills needs.

- Supporting the projected increase in demand for Automotive/STEM learners.

- Integrating the provision into the main site, greatly enhancing the learners experience and aiding efficient timetabling by allowing users to access facilities between the campus buildings.

- Creating a bespoke high-quality facility that will help attract learners and employers.

- Creation of collaborative working spaces that will foster the interdisciplinary skills and independent learning that is a crucial part of the development of higher level skills.

- Development of an energy efficient facility that supports the College's ambitions to reduce its Carbon footprint in line with the Government's 2050 Net Zero target.

Nissan Leaf - Charging

2.0 CLIENT BRIEF, DEVELOPMENT & PROCESS

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2.1 VISION & DRIVERS

SHOWCASE - Create a distinctive and prominent identify to assist in attracting learners and employer partners.

INDUSTRY STANDARD - High quality facilities to meet the specific curriculum needs, and support the use of new teaching technologies.

FUTURE PROOFING - Flexible and Adaptable -

Flexible facilities, adaptable to changing employer needs.

MAXIMISING LEARNING - Integrate the new facility into the wider specialist and support facilities already available on this campus; efficient by avoiding duplicate facilities and enhancing the student experience.

PROTECT & PRESERVE - Energy efficient sustainable facility, reflecting the curriculum offer of sustainable technologies and engineering practice in response to the Climate Crisis and 2050 Net Zero target, beginning with a fabric first approach delivering energy /carbon savings whilst maximising value for money.

EFFICIENT DESIGN - Providing a cost effective solution that maximises the benefits offered to learners whilst providing robust and effective facilities, with careful consideration of future maintenance and operational liabilities.

COLLABORATION Fostering a genuine partnership between educational and industry partners to enhance the student experience and support employer engagement, through specialist and multi-disciplinary teaching and learning.

ROLE MODEL - Use of the new building as a learning tool and example of best practice.

2.2 CURRICULUM REQUIREMENTS

The curriculum plan for the new facility envisages delivery of a range of Level 3-7 courses across a number of Automotive, Engineering and Technology areas including:

- Vehicle Maintenance - light vehicles (cars and vans)
- Hybrid and Electric vehicle operation and maintenance
- Low Carbon & Sustainable Engineering
- Advanced Manufacturing

By year 2024/25 the College envisages around 650 enrolled students using the Future Technologies Centre, across a mix of Full Time and Apprenticeship provision. This will require around 8200 hours of weekly Guided Learning Hours being delivered in the new building.

The DfE space needs assessment undertaken at Stage 1 and 2 identified a total space need for of around 3,150m2.

Some variances from the original target model were identified through the consultation process with the curriculum team and employer partners which will allow anticipated future developments in industry and teaching delivery to be accommodated in the future, including elements such as:

- Standardised classroom sizes,
- Classrooms equivalent to half a specialist lab for future conversion,
- Additional specialist lab facilities seen as the future direction of teaching delivery and industry need,
- Individual study and collaboration zones doubling as social areas and spaces for employer led events,
- Area allocation within teaching spaces for storage in place of independent storage areas,
- Dedicated changing areas for the large scale workshops.

Key areas identified for curriculum delivery and the College's broader aspirations are:

- Vehicle Maintenance Workshop - Large flexible hands on workshop for multiple groups, with height and structure suitable for vehicle lifts with dedicated changing.
- Core Skills Workshop - Workshop for development of core automotive maintenance and engineering skills using rigs rather than full vehicles to maximise space efficiency, together with specialist simulation systems, bench areas for machine tools skills, with dedicated changing.
- Engineering Labs -Specialist 'small-scale' flexible engineering labs to provide both theory and hands on teaching using virtual /simulation technologies and rigs to provide a wide range of engineering and control systems without the need for large scale/inflexible equipment.
- Flexible Computer Labs - Large computer suites to a high specification to support simulations / 3D modelling etc, utilised for both formal teaching and independent study/ project work, and including equipment/small scale simulation rigs etc.
- Technology Enabled Active Learning Space - encouraging group working, with supportive integrated technology.
- General Teaching Rooms - Flexible general teaching spaces with a professional environment for both theory teaching and for employer events and meetings.
- Breakout/Independent Study/Collaboration Spaces - Flexible break out areas to support individual study and group work/projects outside of formal teaching.

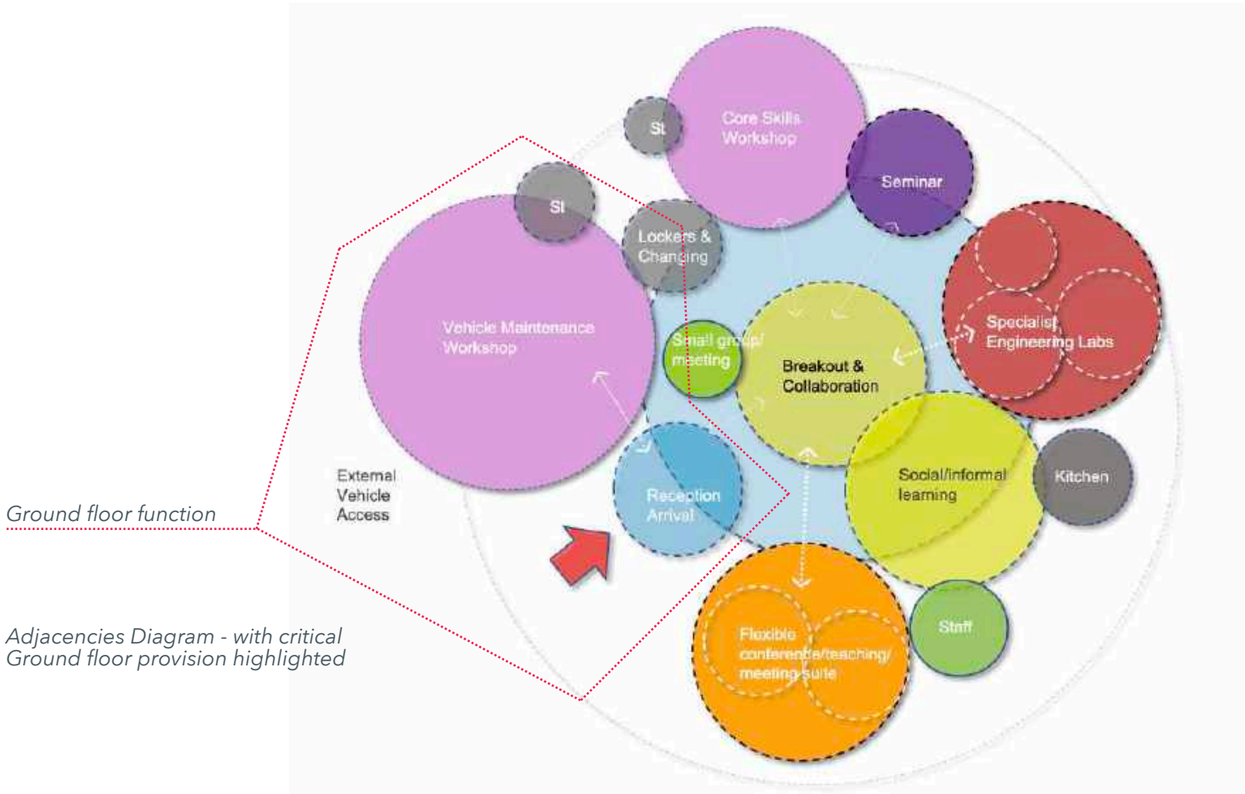
Supported by:

- Reception - Welcoming secure space with professional feel, showcasing activity beyond.
- Employer office and Meeting Space - Flexible office/ meeting/seminar space that can be used by employer partners, showcasing industry learning.

- Academic Staff/Technicians/Prep area - base for c15-25staff.
- Cafe/Kitchen Facilities - Small reheat facility to retain students on site and also allow the building to operate independently from the wider campus for out of hours events.
- WC's etc.- Individual non-gender cubicles to support inclusivity.

Key impacts on the building design to facilitate delivery are:

- Vehicle access into the building - Ground floor provision.
- Min clear workshop height of c 4300mm to allow for installation of vehicle ramps - Ground floor provision.
- Column free zones to support vehicle movements - Ground floor provision.
- Structure to include provision for vehicle lifts recessed flush into the floor to facilitate vehicle movements, flexibility and future adaptability - Ground floor provision.
- Electric vehicle charging - Ground floor provision to support fire strategy.
- Dedicated changing areas for workshops o foster use of PPE and avoid dirt being spread into cleaner areas - Ground / first floor provision.
- Large lift to transport rigs (in place of whole vehicles) and equipment to upper levels.
- Specialist servicing.
- Connections between spaces physical and visual, and flexible use between areas.
- Security measures.
- Centralised collaboration areas, accessible to all areas.
- Rooflights for daylighting to depth of plan.



Adjacencies Diagram - with critical Ground floor provision highlighted

Example use of recessed vehicle lift in a column free space to maximise workshop flexibility

Flexible cafe/social learning space - Example from University of Nottingham

2.3 CONSULTATION & APPROACH

Project Plan

The College has an estates and senior leadership team with experience of the successful delivery of projects of the scale of (and larger than) the proposed project.

A dedicated Project Delivery Group has been formed including representatives from the College's estates, curriculum, and finance teams. This group will have responsibility to review/ approve the design to ensure it remains aligned to the core project objectives.

They will be supported by external consultants as identified in section 1.

This multi discipline team provides the College with a single point of responsibility and clear lines of communication.

The Project Manager is responsible for a Project Execution Plan setting out processes for internal/external consultation and approval, change control and KPI's, and will assist the College with programme, project risk registers, change control and contractor procurement process.

Reporting at each RIBA work-stage ensures a 'no-surprises' approach; enabling the College to sign off the design prior to moving forward.

In line with the Instrument and Articles of Government for the College, the Corporation will maintain oversight of the project, via the Finance & General Purpose Committee (F&GP). A Special Interest Group including college governors and senior management will meet termly and reporting into F&GP.

2.4 CONSULTATION - COLLEGE

Funding

Funds for the scheme have been secured through application to the Department for Education (DfE), and meet their criteria for the assessment of need and efficiency.

College Consultation

Key educational and estate objectives were identified with the College and have driven the design. Curriculum need was assessed and established, and the design developed to suit the need. A space need analysis was undertaken to define the types and functions of the space to further develop the brief.

Stage 2

The vision and brief for the scheme was developed in consultation with the College at RIBA Stage 2, with the report completed in Autumn 2021.

The following tools were used when developing the brief in order to ensure that the capital investment would be driven by the specific curriculum needs and vision, whilst delivering excellent value for money:

- DfE Space Benchmarking/SoA Tool
- Consultation with the Curriculum Team
- Industry/Partner Engagement
- Spatial/Functional Adjacencies

Stage 2 Revisited

Funding approval for the scheme was received from the DfE, however rising construction costs subsequently left the scheme unsustainable against the secured funding. The College therefore explored a number of avenues to advance the scheme over the intervening period.

Options were developed and analysed and a reduction to a three storey scheme was identified as the most efficient to reduce costs and meet College need.

This necessitated a reassessment of the brief with alterations focused on retaining and maximising workshop space as identified as most important to curriculum need. The College identified that they no longer needed the building to accommodate HGV provision which allow the infilling of double height space, maximising workshop provision within a more efficient envelope, hence helping to mitigate the reduction in other specialist and general teaching areas.

Although the revised and reduced scheme would provide the College with a valuable asset, this was a compromise solution. As such the College targeted additional funding with a view to meeting their original aspirations for the build and maximising the use of the site.

The College has now been successful in securing additional funding to match the needs of the project in the current construction market, which has allowed the scheme to be advanced once again as a 4-storey scheme. This in effect led to a reassessment of the requirements established at Stage 2, verifying the original goals / priorities while incorporating some of the elements identified during the rationalisation.

Stage 3

Design proposals have been developed through consultation with the Curriculum Team to ensure that the specific curriculum needs and vision will be met, that the facility will offer excellent value for money, and the the facilities will be well utilised and flexible enough to respond to inevitable changes in the industry and curriculum.

A number of meetings have been held to explore the detail /

specific key facilities required to support the planned future skills courses. Particular importance has been placed on creating flexible and adaptable spaces, as well as high quality specialist facilities.

The following areas have been explored:

- Spatial/Functional Adjacencies
- Teaching delivery methods
- Collaboration drivers / Student behaviours
- Building Strategies
- Building servicing requirements and strategies
- Equipment servicing requirements and strategies
- Equipment / Furniture requirements

Cost Refinement

To mitigate increasing costs an appraisal has been undertaken with the College of the key scheme drivers and a number of alterations have been incorporated to control cost while safeguarding the quality and vision for the scheme.

Flexible teaching/conference/lecture space- University of Nottingham

2.5 CONSULTATION - PLANNING & HIGHWAYS

Project Description:

New build development on the existing site to provide 4 floors of teaching accommodation of approx. 3019m2 GIFA. This is to house a future technologies centre with specialist workshops, laboratories, classrooms and associated social and staff areas, focusing on motor vehicle and construction skills.

The proposed new Future Technologies Centre requires a full planning application to be submitted.

The College has an excellent and well-established relationship with the Local Authority through its recent building programme and the LPA are very supportive of the College.

The Future Technologies Centre proposals do not contravene policy:

- The building/site is already allocated to education use (no change of use required).
- The proposed new building will broadly follow the same massing and footprint as the existing building.

Additionally:

- The Junction Mills building is not listed and principle of the demolition of the existing building had previously been discussed with the planners.

Demolition of the Junction Mills Building will be undertaken (via a demolition notice, not through this application) to make way for construction of the new centre. This approach is to expediate site investigations to support the technical design and programme following cost review and redesign programme pressures.

There are a number of elements to note:

- The proposed building does face onto one of key roads through Bradford and therefore has a high prominence requiring careful consideration.
- The site, while not itself in a conservation area, is located in close proximity to a conservation area, and as such will have a measured impact upon it.

For these reasons the main elevation onto Thornton road will require a high quality solution that will contribute to the overall urban realm suitable for its context. It is envisaged that the remaining three elevations can be considerably simplified in order to balance costs. The proposals have been developed on this basis.

History

Original pre-application submission 2021 - 21/04377/PMJ for a 4-storey scheme:

In line with the City Council's requirements a formal planning pre-application process was commenced with submission of the proposed drawings and rationale in order to seek formal feedback on the emerging design in 2021. Original pre-application submission 2021. As a result a pre-application response with advice was received, dated 25/10/2021.

Preliminary discussions were very positive, with the LA supportive of the project's objectives and design principles.

As discussed, a market of rising construction costs subsequently left the scheme unsustainable against secured funding and the College looked to explore alternative options including reducing the size of the scheme to a 3 storey building. With additional funding now secured to match the needs of the project, the scheme has been advanced as a 4-storey solution, which has benefitted from taking on board the advice provided

at the original pre-application stage.

Current Consultation

In June 2023 a new pre-application ref 23/02278/PMJ was submitted to the local authority, following re-engagement with the LPA as the scheme has developed.

The scheme has been notably developed. As part of this application broader information was provided to reflect the advancing scheme and the elevational language has been articulated to create richer facades than the original massing based application.

The LPA remain supportive of the project's objectives and design principles. A formal response was received in August 2023 from all consultees and the team was able to meet with the Planning Officer to review the principles and approaches of the scheme.

Feedback in regard to all areas including Highways, Environmental Protection, Conservation, Biodiversity, Sustainability, and Security, have been received and the scheme has been reviewed by the team in response to this feedback.

Independently liaison had been progressed in regard to structural solutions for infilling the existing building basement as part of the demolition works, the impact on the adjacent street and any licensing and agreements that need to be put in place.

Further work has been undertaken to develop facade treatments, articulation and materiality to strengthen the urban realm while providing an efficient and cost effective solution meeting both College need and funding parameters. The design simplifies the secondary elevations to provide focus on the main street frontage onto Thornton Road and facing the Conservation area.

2.6 PROGRAMME & PROCUREMENT

The project programme has been developed based on the experience of the project team to provide a realistic and deliverable plan that balances delivery of the project as soon as possible whilst managing potential risk.

It is the College's intention that the full planning submission will be made at RIBA stage 3.

The misalignment of the cost with the funding, together with the extended funding process delayed the project programme, which was adjusted to accommodate the work on a 3 storey scheme prior to the College securing additional funding to progress with the current 4 storey scheme and now includes the periods of redesign to reassess the Stage 2 proposals and progress onto Stage 3. This was further compounded by continued cost increases, necessitating a further delay to the planning submission to critically appraise costs and ensure that the proposals for submission are robust and deliverable.

It is now critical to the programme to submit the Planning application to ensure determination is achieved ahead of the planned start on site date, to in turn meet the planned completion date prior to occupation for the start of the academic year in 2025. The further pressure on programme has necessitated that the demolition of the Junction Mills building be taken out of this application and undertaken ahead of the end of the planning determination period through a demolition notice to then allow critical site investigation to take place to feed into the technical design and de-risk design and programme.

The College has appointed the full design team utilising the OJEU compliant Procurement Partnerships framework. In line with DfE guidance the Contractor will be appointed through a DfE approved framework.

At RIBA Stage 3 a full procurement assessment was undertaken to evaluate the potential procurement routes for the main contractor, including examining opportunities for early contractor involvement in the project through a two stage tender process or framework route in order to maximise potential contractor and supply chain input into the emerging design and reduce cost and programme risk.

A number of factors influenced the selected procurement route, including rising construction costs, uncertain market conditions, and the need to undertake further site investigation work which are not feasible until post demolition of Junction Mills building.

Selected procurement route is two-stage design and build.

Following testing market interest the tender process has begun with the Stage 3 design, with the tender process ongoing at the time of writing. The first stage tender will include prelims, profits, and overheads for the main construction works, and a full tendered price for the demolitions package.

Further work will be undertaken during RIBA Stage 4 to review and refine the detailed programme including seeking early contractor input. However proposed key milestone dates are:

Aug 2023 - Completion RIBA Stage 3.

Aug 2023 - Feedback from current pre-application with the LA planners and liaison / consultation.

Aug - Sept 2023 - Prepare detailed planning application.

Sept 2023 - Cost appraisal / refinement.

Oct 2023 - Submit Planning application for FTC

Oct 2023 - Dec 2023 - Planning Determination period.

Aug - Oct 2023 - Contractor Tender and appraisal process.

Nov 2023 - Mar 2024 RIBA Stage 4 Design (contractor design development).

Oct 2023 - Mar 2024 - Mobilisation/Demolitions Site Works

Apr 2024 - July 2025 - New build site works.

July 2025 - Aug 2025 - Commissioning and moves.

3.0 PROPOSED SITE

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DESIGN & ACCESS STATEMENT

3.1 PROPOSED SITE

It is proposed to locate the new Future Technologies Centre on the site currently occupied by the College's mothballed Junction Mills Building.

The Junction Mills building forms part of the College's Great Horton Road campus. It is located just to the north of, and below, the main David Hockney and Lister buildings. The Junction Mills building and adjacent Garden Mills building are accessed from the rest of the campus via a cobbled road and steps.

The refurbishment of the adjacent Garden Mills building, which sits on the route between Junction Mills and the rest of the main campus is underway providing connectivity to the main campus.

As part of the main campus, the Junction Mills location offers an opportunity to provide students with vital links to wider provision that the College has to offer, and will provide an excellent addition to the vibrancy of the campus life.

The new Centre forms an important part of the wider estate strategy and masterplan for the College campus, focused on enhancing the quality of the teaching and learning facilities whilst improving space efficiency. A key driver for the proposed location on the main Great Horton Road campus is therefore the ability to integrate the new facility into the wider specialist and support facilities already available on this campus; avoiding duplication of specialist and support facilities and enhancing the student experience.

3.2 EXISTING BUILDING

The existing building sits to back of pavement line on Thornton Road (North).

The existing Junction Mills building is in very poor condition, (FECDC category D) and as such the College have suspended its use.

Site investigations and surveys have identified significant issues internally, which have in turn impacted investigation works. The building has structural issues, ageing building fabric and life expired services, and also contains a significant level of asbestos, all of which have the potential to impact health. Bringing the building up to current standards would require significant investment.

The building is also restrictive in terms of structural and layout arrangements and does not lend itself to the College functions that are most in shortfall / demand over the College estate. The lack of flexibility in the structure means that the building cannot be reconfigured to accommodate the specialist facilities needed.

It is therefore proposed that the building is demolished to make way for a new facility that can meet the College need.

Demolition will be undertaken under a demolition notice and is not part of this application. This approach is in order to advance works following the impact on programme of critical cost review works which has delayed the planning submission. Early demolition will allow further site investigation works to take place to feed into the technical design of the proposed building, mitigating risk on the design and programme.

3.3 EXISTING SITE ARRANGEMENTS / POSITION

The site has a constrained footprint.

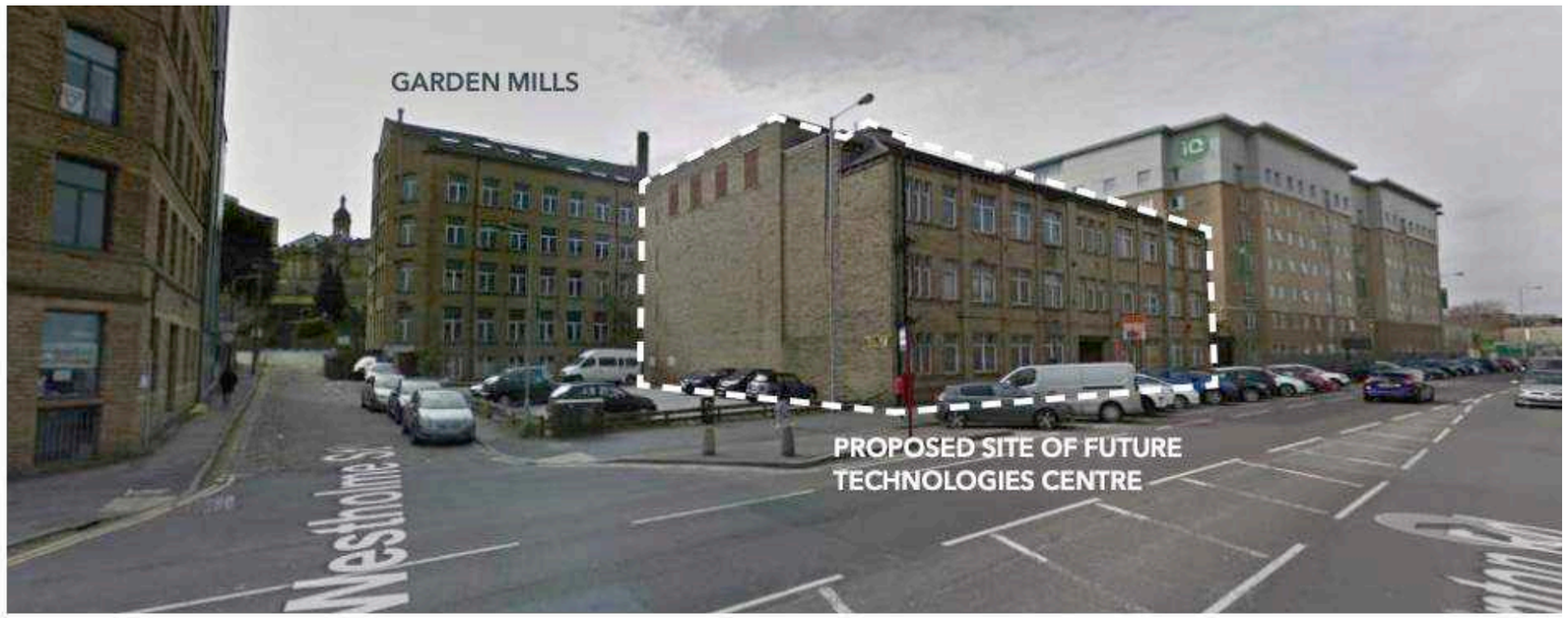
To the rear (South) it is bounded by the Bradford beck, a stream which runs between the Junction and Garden Mills buildings and runs nominally parallel to Thornton Road. The existing Junction Mils building sits relatively close to the beck wall with and access path while the Garden Mills building sits on the line of the beck. This waterway leads into the city, and is a narrow green corridor through the urban area.

To the west, neighbouring the site, is a more recently developed student residential block of limited character. Both Junction Mills and the residential building have access routes to the side of the buildings between them and are separated with a stone wall in a state of disrepair and a fence.

Within the site, the strips of land surrounding the building to South and West, are rough areas of hardstanding that had become overgrown through lack of use. The area has been identified to contain significant levels of vegetation of invasive species, including to the beck wall and alongside the stream. Overtime the are to the rear of the building has become an area used for drug taking. As part of the site investigations this area has undergone a clinical clean up, and has been fully secured.

Junction Mills sits on the East boundary of the site. The adjacent site is an open air car park owned by the Local Authority.

The current design for the proposed Centre has been developed without reliance on this adjacent plot of land, however, this would offer opportunities to provide improved access into the workshops and/or external parking, arrival or project space. The College is therefore seeking to engage with the LA to explore opportunities for acquiring this land via lease or purchase to future proof the development. The proposed building design is configured to allow for easy future connection through the East elevation if this opportunity were to come to fruition.



Junction Mills photos as existing

3.4 CONTEXT

Thornton Road itself is was built as the Bradford and Thornton Turnpike in the mid 1820s, when an Act of Parliament approved the construction.

The area to the North of Thornton Road is the Goitside Conservation Area.

The Goitside area of Bradford is so named for the goit, a manmade drainage system, originating as a medieval goit, the purpose of which was to redirect water from Bradford Beck to power the manorial corn mills. It stands as evidence of early engineering practices and the importance of water in the development of the settlement.

The area around the goit and beck formed the site of Bradford's earliest industrial development, with mills, factories, and foundries, and with links to Titus Salt (founder of Saltaire).

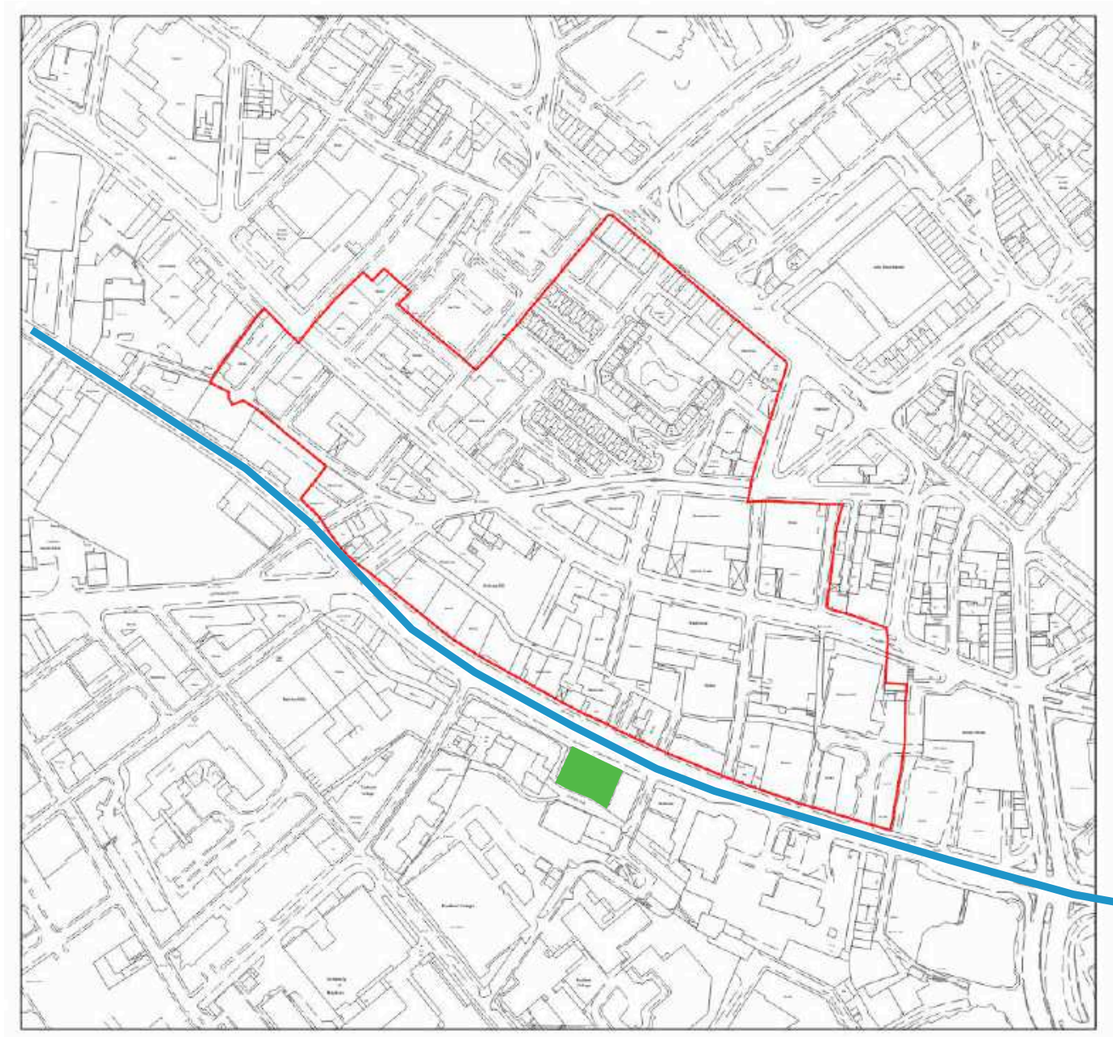
The Goitside Conservation Area Assessment refers to the areas as - "The Goitside Conservation Area represents a substantially complete and well-preserved urban landscape typical of the social, commercial and industrial elements of the late 19th and early 20th centuries in Bradford."

The historical and archeological significance of the area can be further understood by referring to the separate Heritage statement supporting the application.

While the proposed site does not sit within the conservation area itself, it sits adjacent to the conservation area, and as such has the potential to have a measured impact upon the conservation area.

Although varied, typically buildings in this area are around five storeys, with larger scale storeys at ground floor, a repeating rhythmic fenestration pattern, and are generally of stone construction with stone details.

Along Thornton Road itself there are a number of buildings forming a strong building line to the Road in the vicinity of the site. However moving away from the site there are a number of breaks in this rhythm weakening this route.



Goitside Conservation Area marked in red

Thornton Road overlaid in blue

Site marked in Green

View up Westholme Street towards Garden Mills and the David Hockney building beyond

3.5 KEY VIEWS

The Junction Mills site offers a highly prominent location with a long frontage to the busy Thornton Road - providing fantastic opportunities to create a dynamic shopfront to the new centre.

The site is orientated such that the main Thornton Road frontage faces North / North East.

View of Junction Mills in context

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Heading into Bradford along Thornton Road

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Heading out of Bradford along Thornton Road

3.6 SURVEYS & SITE EXPLORATION

As the design has developed, the College have commissioned a number of surveys and the team have undertaken investigations, to identify and alleviate potential areas of risk, inform the design and test the viability of the proposals.

Some of the surveys undertaken are listed below. Further supporting information for the planning application is listed in section 7 of this report.

Topographical Survey

Undertaken to inform the layout and siting of the new building.

Asbestos, Lead & Anthrax survey -

Undertaken to inform and cost the demolition works.

Preliminary Ecological Assessment -

The PEA advised that there was the potential for bats to be present in the Junction Mills building or the beck wall and recommended a bat survey was undertaken.

The PEA identified the presence of invasive species of plants on site.

The PEA reviewed the biodiversity of the site in order to ensure a biodiversity net gain within the proposals.

Bat Survey -

A bat survey has identified bats in the Junction Mills building. Further surveys have been undertaken to establish the type of roost and hence the related type of licensing with which the presence of bats needs to be addressed.

Invasive Species Mitigation -

An assessment of the invasive species and the related mitigation methods was put in place. It is intended to clear the site of all invasive species. Additionally this facilitated access to the site for a site clean up and further survey work.

Utilities and CCTV survey -

To inform the Servicing and Civils strategies.

Acoustic Noise Survey -

To inform the construction of the building envelope and the servicing and ventilation strategies.

Flood Risk Assessment -

The proposed site for the Future Technologies Centre is bounded to the north by a brook that runs between the Junction Mills and Garden Mills buildings. The flood risk map shows the site to have a low risk of flooding from the stream, however there is a risk of flooding from the Thornton Road side of the building due to how the waters would be funnelled between the buildings.

A detailed flood risk assessment has been undertaken by Curtins (provided with this application), and liaison with the relevant bodies has taken place, and the beck has been suitably categorised to not require further assessment by the Environment Agency.

The team has undertaken a review of the local levels, further supported by the topographical survey, together with access requirements for people and vehicles into the ground floor of the building. As the building footprint maximises site use for the key ground floor provision the building line is proposed as being to the back of pavement line. This constraint limits the height of the ground floor while maintaining access. Careful consideration has identified the appropriate ground floor level that allows for access and sits above the key flood datum level hence any requirement for flood resilient construction to the main ground floor level is alleviated.

Phase 1 Site Investigation -

A desktop/historical ground investigations review has been undertaken to inform structural design and waterproofing requirements. Limited sample borehole / test pit testing has taken place to further inform the design. There is clearly very limited opportunity to undertake further investigations due to the constrained site and existing building. Thorough site investigation works will not be able to take place until post demolition of Junction Mills and at this stage assumptions have needed to be followed. Further efforts to access through the basement of Junction Mills for testing have been made.

It is intended to undertake demolition of Junction Mills through a demolition notice to expedite the works (a move from the original strategy of including demolition in the planning application given the delayed submission due to cost review). This will allow critical SI information to inform the developing technical design stage, to de-risk the assumption based Civil and Structural design, and related architectural co-ordination.

Flood Map

4.0 DESIGN PROPOSALS

BOND BRYAN

FUTURE TECHNOLOGIES CENTRE, JUNCTION ROAD, BRADFORD COLLEGE

DESIGN & ACCESS STATEMENT

4.1 EXISTING BUILDING

Junction Mills, 129-133 Thornton Road - Educational use.

As described in Section 3 the Junction Mills building is in very poor condition (FECDC category D), including structural issues, ageing building fabric, life expired services, and asbestos content.

Efforts to dispose of this building have repeatedly failed with the building condition and location making it of little commercial value. Bringing the building up to current standards would require significant investment.

As highlighted the proposed scheme is being funded by the DfE and the funding is determined by function within floor area assessment criteria. There is limited scope for any project abnormals as associated with the existing building. It is therefore unviable under the project to retain the existing building and bring it up to standard.

The building is also restrictive in terms of structural and layout arrangements and does not lend itself to the College functions that are most in shortfall / demand over the College estate. The lack of flexibility in the structure means that the building cannot be reconfigured to accommodate the specialist facilities needed.

It is therefore proposed that the building is demolished to make way for a new facility that can meet the College need. As noted demolition will be undertaken under a demolition notice and does not form part of this application. This is in order to expedite the works to ensure required site investigation information can effectively inform the technical design stage.

Demolition of the vacant Junction Mills Building will allow the College to construct a bespoke new build Future Technology Centre, focused on meeting the changing skills needs of the automotive and manufacturing industries, and to vacate the poor quality/leased Bowling Back Lane facility.

4.2 NEW BUILD DESIGN DRIVERS

Identified design concepts:

- Maximise the ground floor to support specialist function.
- Maximise the frontage for the motor vehicle / sustainable technologies workshop to create a dynamic new ‘shopfront’ for the college and showcase the learning occurring within.
- Light-wells to maximise daylight in deep plan block and visually connect the activities across floors with due careful consideration to fire and acoustics.
- Flexible employer engagement suite overlooking the main workshop.
- Simple regular grid to create standardised room sizes that could be easily adapted to meet changing needs.

4.3 ORIENTATION

The Junction Mills site offers a highly prominent location with a long frontage to the busy Thornton Road - providing fantastic opportunities to create a dynamic shopfront to the new centre.

The site is orientated such that the main Thornton Road frontage faces North, allowing the frontage to be visually opened up to showcase the facilities within without risk of overheating.

Junction Mills

The rear of the building looking towards the beck, faces South and as such is the ideal location to position the external terrace social space, whilst using the mass of the building to shield it acoustically from the busy thoroughfare of Thornton Road.

4.4 MASSING

The proposed new building will broadly follow the same footprint as the existing, while increasing the massing to an extent which is considered appropriate for the location and context.

It is proposed that the new Centre will be four storeys, plus staircase access and plant room on the roof level.

The scheme puts forward a strong frontage to Thornton Road. A staircore is taken to roof level adjacent to the residential block, stepping up to the higher massing. An external terrace is incorporated at level 3 to the south side of the building overlooking the beck, without diluting the strength of the block.

The proposed position of the new block will place it to back of pavement on the Thornton Road, and to the site boundary to the East, while a strip of land to the South and West are landscaped with limited planting while primarily providing maintenance access and emergency egress route.

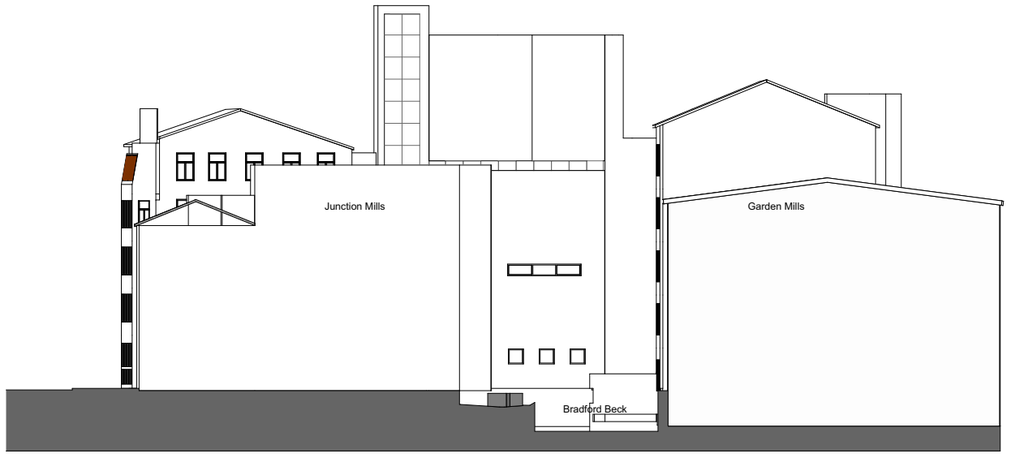
Given the restrictive nature of the plot the footprint of the building is maximised across the site to allow for key critical ground floor facilities with the majority of the ground floor being a large scale workshop and the remainder entrance, circulation, and support facilities. The nature of the function requires a ground floor location with vehicle access.

The design proposes a floor to floor height of 5550mm Ground to First and 4050mm for each of the upper levels.

This offers the optimum balance between maximising the accessibility for learners whilst making efficient use of the site and budget.

The new building will be higher than the existing Junction Mills building, which will bring it more closely aligned with the neighbouring context which is typically a storey higher, and additionally with the stairtower stepping up towards the higher residential building to the West as noted.

Allowing for the provision of a parapet to the roof to provide safe access, the proposed overall building height will be around 19.45m over back of pavement, with the staircore plant area an additional 1.9m over this height.



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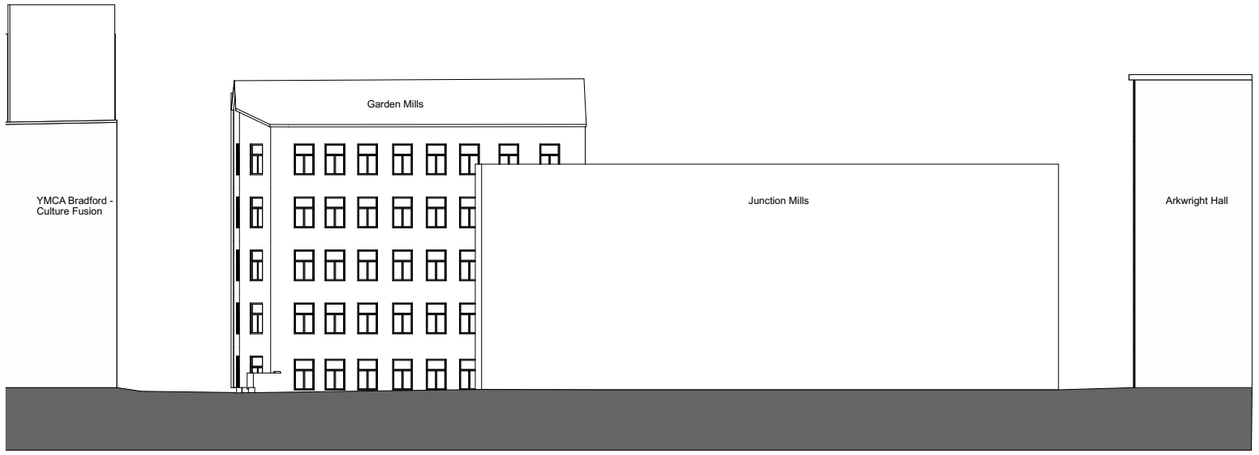

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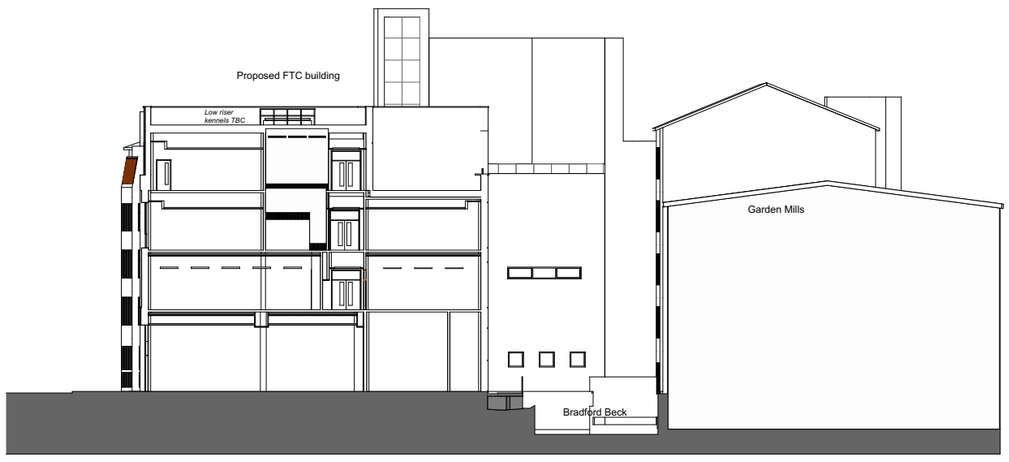
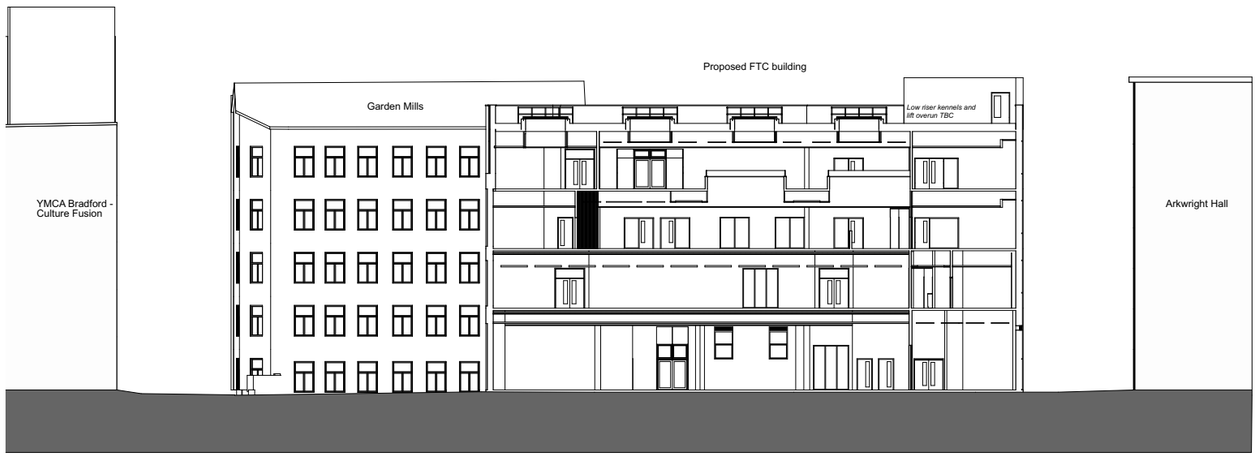


1:200 Proposed Site Section 1



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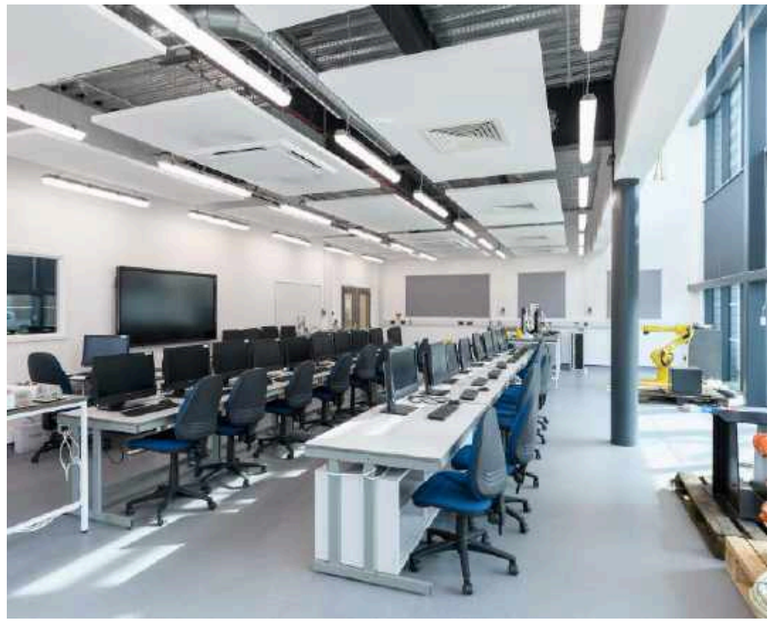
Existing and Proposed Site Sections

4.5 PROPOSED FLOOR PLANS

College teaching facility including specialist automotive workshops, labs and digital suites to industry standards.

Key Concepts

- Future proofing the design by positioning the entrance to the West end of the building. This allows for future connection into circulation and workshops through the East gable if the College are able to secure the adjacent (car park) plot in the future.
- Large footprint to site ratio to maximise ground floor for critical workshop space.
- Maximise workshop area as a critical provision.
- High ground floor to facilitate use of vehicle lifts.
- Extensive glazing to streetscape to showcase learning within.
- Welcoming reception to assist employer engagement.
- Minimising ancillary space by integration with other campus facilities
- Lift to move engine rigs to first floor workshops with direct route from ground floor workshop.
- Changing areas as access to workshops to maintain cleanliness and foster the use of PPE.
- Linked workshop storage.
- Specialist lab and ICT facilities to meet needs of changing directions in industry.
- General teaching spaces of a standardised size and arrangement to allow future flexibility of conversion between classes and labs.
- A staff base for presence and passive supervision.
- Space for employer events and agile working.
- Collaboration space for group engagement, and individual working, with a gradated approach to formality through the space with the use of furniture.
- The collaboration area doubles as a social space, with a light cafe provision to serve students without the need to leave the department.
- Circulation to the centre of plan, with naturally daylight teaching spaces to the perimeter.
- Efficient use of the deep plan areas of the building by locating Collaboration / social space centrally and the use of roof-lights and voids to naturally top light the spaces.and bring natural daylighting into the heart of the building.
- Internal glass screens bring connection between spaces, passive supervision, and a sense of ownership.
- An external south terrace provides additional social space to the upper level, overlooking the beck and away from the noisy thoroughfare of Thornton Road. Potential to enhance with planting and seating in the future.
- Staircase to provide access to main roof for maintenance.
- An area of Photovoltaic panels to the roof.
- Secure fenced site boundary for maintenance and emergency egress softened with limited soft landscaping.
- External treatments to the escape route sensitive to the beck wall, cantilevering over the existing structures.
- Clear entrances to street frontage, with re grading of pavement / parking bays area to support access to ground floor level set above the flood level and hence flood resilient construction is not required to the main floorplate.
- Additional support facilities located elsewhere in close proximity on the campus to allow teaching provision to be maximised within this building.



Example Electrical/Electronics engineering lab- Bedford College

Increase use of rigs and simulation systems to maximise flexibility

FUTURE TECHNOLOGIES CENTRE, JUNCTION MILLS, BRADFORD COLLEGE

DESIGN AND ACCESS STATEMENT - 4.0 DESIGN PROPOSALS

Means of Escape

Footprint constrained to provide means of escape to north and east.Escape route and maintenance access, softened with limited planting to borders.

Glazed screens to provide passive supervision between workshop and changing area.

Access to workshop through changing / locker area to ensure dirty footwear/ clothing is kept in the workshops and and fostering use of PPE.

Phone charging lockers provided.

Main circulation staircase.

Escape staircase only at low level.

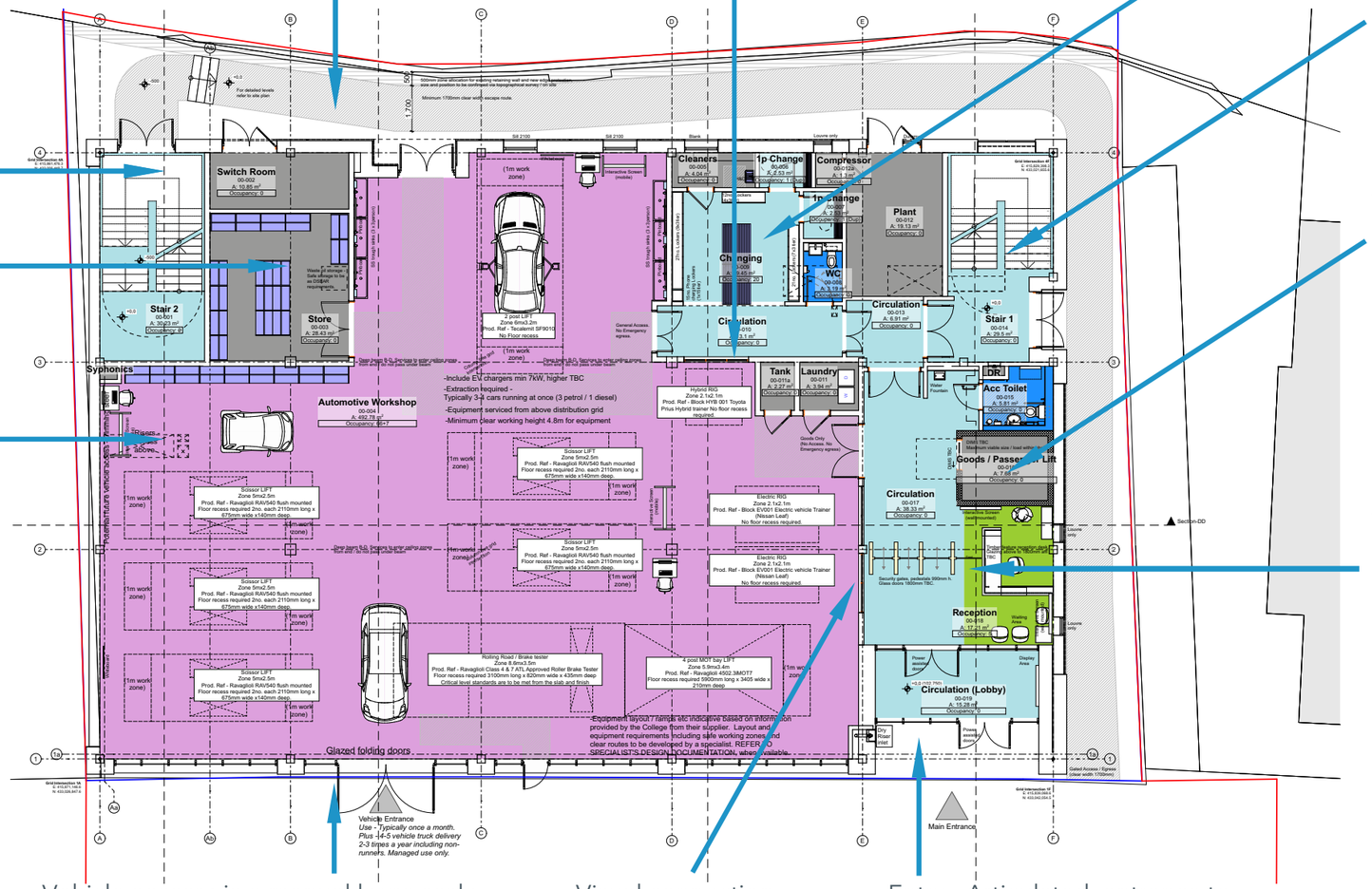
Storage area for large parts.

Additional storage to perimeter of workshops by use of specialist storage/

Large Scale Workshops – Vehicle maintenance workshop for multiple groups teaching both traditional and new technology hands on automotive skills in a flexible environment. 4300mm clear height to facilitate vehicle lifts.

Includes EV Area - Specialist area for Electric vehicles.

Detailed equipment layout to be be developed in collaboration with employers and specialist suppliers



Lift - Large combined goods and passenger lift to enable transportation of rigs etc to upper floor labs and workshops.

College to confirm use of the lift as part of their fire evacuation strategy plan (Not required by Building regulations at this scale).

Reception – Area kept to minimum to maximise ground floor area whilst providing support for all users, and support employer engagement / events.

Reception directly opposite entry lobby providing surveillance of the main entrance and any building users requiring support as they enter the building.

Waiting area within reception.

Accessible WC easily available.

High quality professional feel with views into the workshop to showcase activity.

Speedgates to provide learner security.

Highly glazed frontage for showcasing learning provision

Vehicle access via a manual large scale glass doors within curtain walling screen to provide access and maintain street frontage.

Visual connection between reception and main workshop

Entry - Articulated entrance to provide draw, clear identity, and welcome.

Automatic doors for ease of access.

Display area within lobby

Proposed GA Plan Ground Floor

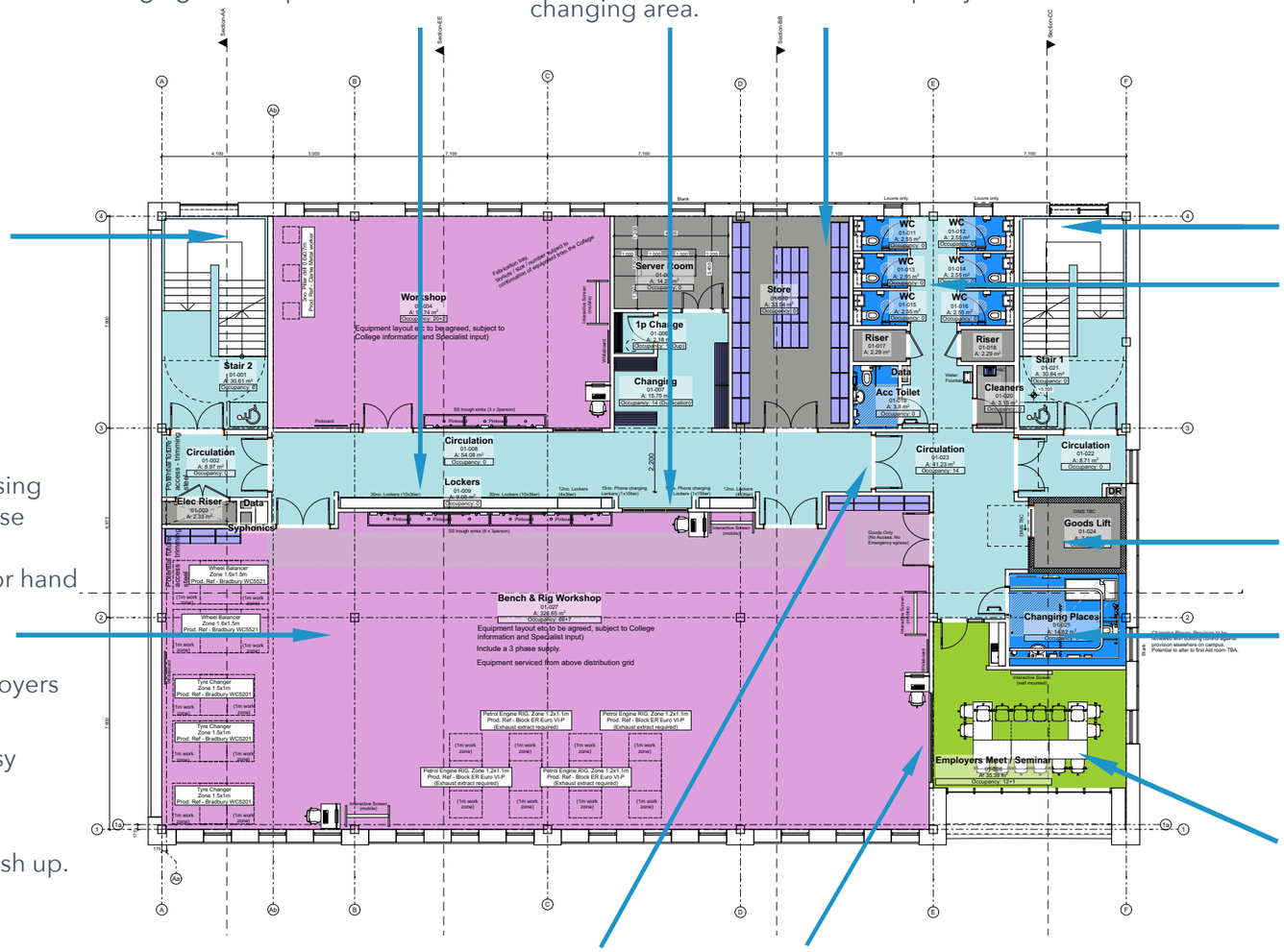
Access to workshops through changing / locker area to ensure dirty footwear/ clothing is kept in the workshops and and fostering use of PPE.

Phone charging lockers provided.

Glazed screens to provide passive supervision between workshop and changing area.

Storage area for large parts.

Additional storage to perimeter of workshops by use of specialist storage/racking systems to keep workshop tidy.



Circulation staircase.

Large scale core skills workshop for development of core automotive maintenance and engineering skills using rigs rather than full vehicles to maximise space efficiency, specialist simulation systems, and bench / machine tools for hand skills.

Detailed equipment layout to be be developed in collaboration with employers and specialist suppliers.

Theory areas within workshops for easy connection between practical and theoretical skills based learning.

Banked sinks for large scale group wash up.

Circulation staircase.

WC's - Individual gender neutral WC's to support inclusivity.

Lift - Large combined goods and passenger lift to enable transportation of rigs etc to upper floor labs and workshops.

College to confirm use of the lift as part of their fire evacuation strategy plan (Not required by Building regulations at this scale).

Hygiene room to Changing Places standard, subject to liaison with Building Control. Alternative provision on campus may support change to First Aid room - TBC.

Flexible Office/Meeting Room - High quality professional meeting space to support employer engagement and general teaching, with Tea & coffee making facility.

Doors to circulation routes / lobbies on hold open device (release on Fire alarm) to assist aid of movement around the building.

Glazed screens to provide passive supervision and industry connection.

Proposed GA Plan First Floor

Learning/Study/Collaboration Space - A vital part of the Higher Skills ethos and approach is encouraging learners to work independently (individually and in groups), on projects outside the core formal teaching hours. This study/collaboration space is located close to the specialist facilities to enable learners to access these, and benefit from the guidance and support of the staff.

Furniture solutions to maximise flexibility including potential small booths/pods for quieter working/ informal meetings/use of on-line resources etc. Wifi coverage and phone charging provided.

This space will also serve as an informal social space served by a small Cafe Servery to maximise spacial efficiency and retain students within the department through the day.

The space will also provide a flexible space for employer events., with connection to both classrooms and labs for large group events..

General teaching – Standardised to maximise future flexibility for traditional teaching, ICT rooms or specialist demonstration rooms as curriculum needs change, and in pairs / groups to allow for easy conversion to large scale specialist labs/workshops should this be required.

Robust finishes enable learners to move easily all areas.

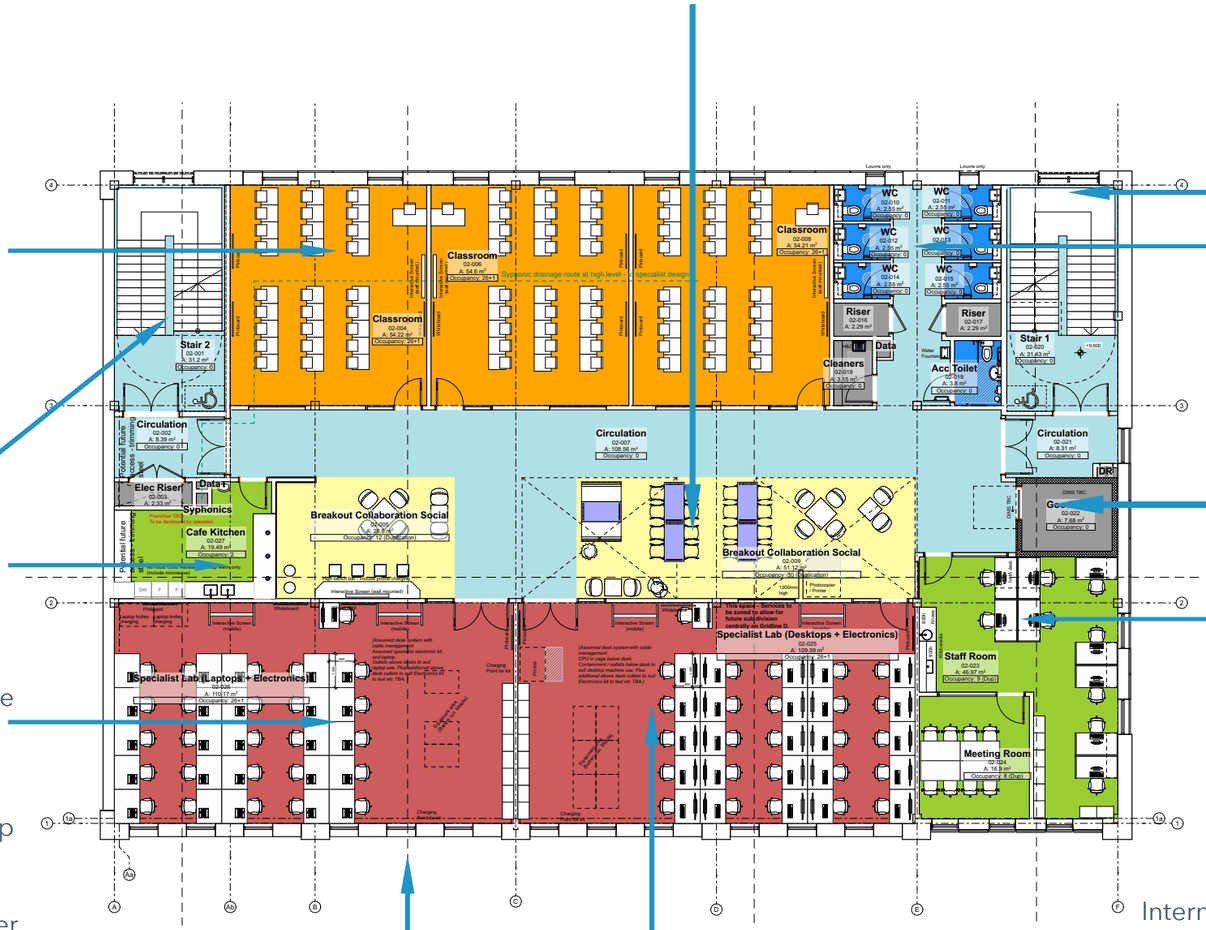
Circulation staircase.

Cafe Servery - Small kitchen facility - assume coffee bar style offer including toasted sandwiches etc.

Specialist teaching - Provision of small scale specialist workshop and lab spaces. Both the curriculum team and employers envisage a substantial move from the reliance on large scale traditional workshop spaces to increased demand for smaller scale workshops and simulation suites where learners can use a mix of rigs, smaller scale simulation tools, electronics and specialist ICT. These spaces are more flexible and spatially efficient.

Furniture solutions vary in the different labs to support a variety of functions as well as desktop machines and laptop solutions.

Proposed GA Plan Second Floor



Rooflights and voids to upper levels provide natural daylighting / daylight penetration into the depth of plan and provided connectivity between levels for collaboration and social connection

Circulation staircase.

WC's - Individual gender neutral WC's to support inclusivity.

Lift - Large combined goods and passenger lift to enable transportation of rigs etc to upper floor labs and workshops.

College to confirm use of the lift as part of their fire evacuation strategy plan (Not required by Building regulations at this scale).

Staff work area for academic and technical support staff, with workstations, kitchenette facility, and meeting space.

Glazed screens to provide passive supervision between staff / teaching areas and Social collaboration space., and visual connectivity to support fire strategy.

Window sized to avoid overheating and optimise daylighting, and spacial orientation to allow daylight to depth of teaching spaces.

Additional doors provided and services zoned to specialist lab to future proof area for future division. Spare capacity in building emergency egress design occupancy to facilitate additional teaching groups.

Internal glazed screens provide visual connectivity between spaces, and create a dynamic space that celebrates learning, provide passive supervision and industry connection.

Doors to circulation routes / lobbies on hold open devices (release on Fire) to aid of movement around the building.

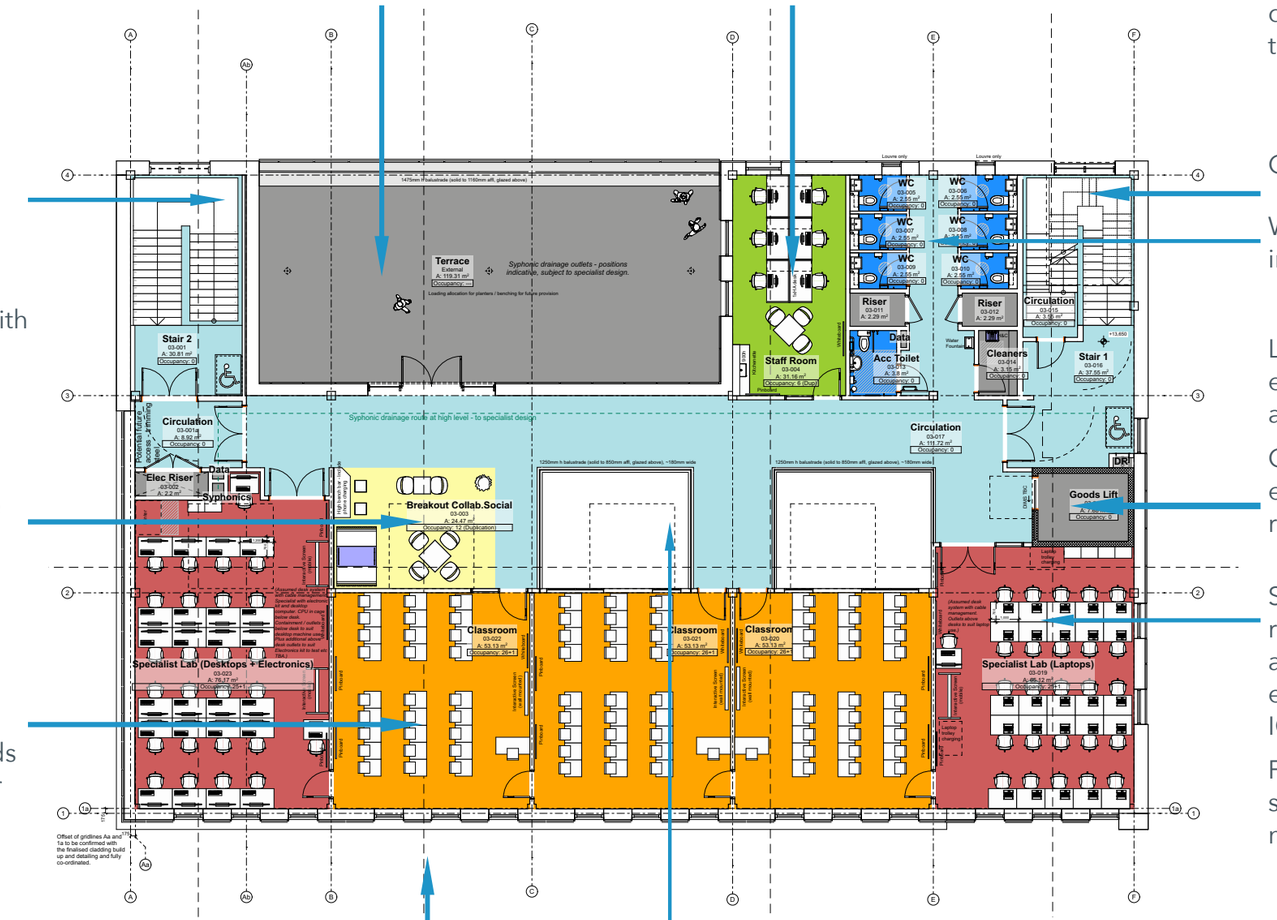
External terrace, south facing – As an additional social and learning space, overlooking the beck as additional amenity.

With the flexibility to be developed with seating and planters in the future.

Staff work area for academic and technical support staff, with workstations, discussion and kitchenette facility.

Glazed screens to provide passive supervision.

Doors to circulation routes / lobbies on hold open devices (release on Fire) to aid of movement around the building.



Circulation staircase.

Circulation staircase.

WC's - Individual gender neutral WC's to support inclusivity.

Learning/Study/Collaboration Space located close to the specialist facilities, with Wifi coverage and phone charging provided.

This space will also serve as an informal social space.

The space will also act as breakout space for employer events.

Lift - Large combined goods and passenger lift to enable transportation of rigs etc to upper floor labs and workshops.

College to confirm use of the lift as part of their fire evacuation strategy plan (Not required by Building regulations at this scale).

General teaching – Standardised to maximise future flexibility for traditional teaching, ICT rooms or specialist demonstration rooms as curriculum needs change, and in pairs / groups to allow for easy conversion to large scale specialist labs/workshops should this be required.

Robust finishes enable learners to move easily all areas.

Specialist teaching - Proposed workshops and labs reflect increased emphasis on the use of simulations and rigs for teaching to improve flexibility and space efficiency, together with electronics and specialist ICT.

Furniture solutions vary in the different labs to support a variety of functions as well as desktop machines and laptop solutions.

Window sized to avoid overheating and optimise daylighting, and spacial orientation to allow daylight to depth of teaching spaces.

Proposed lightwells / rooflights provide natural daylighting / daylight penetration into the depth of the plan / heart of the building and allow natural ventilation to the collaboration zone, as well as emergency smoke venting. They provided connectivity between levels for collaboration and social connection.

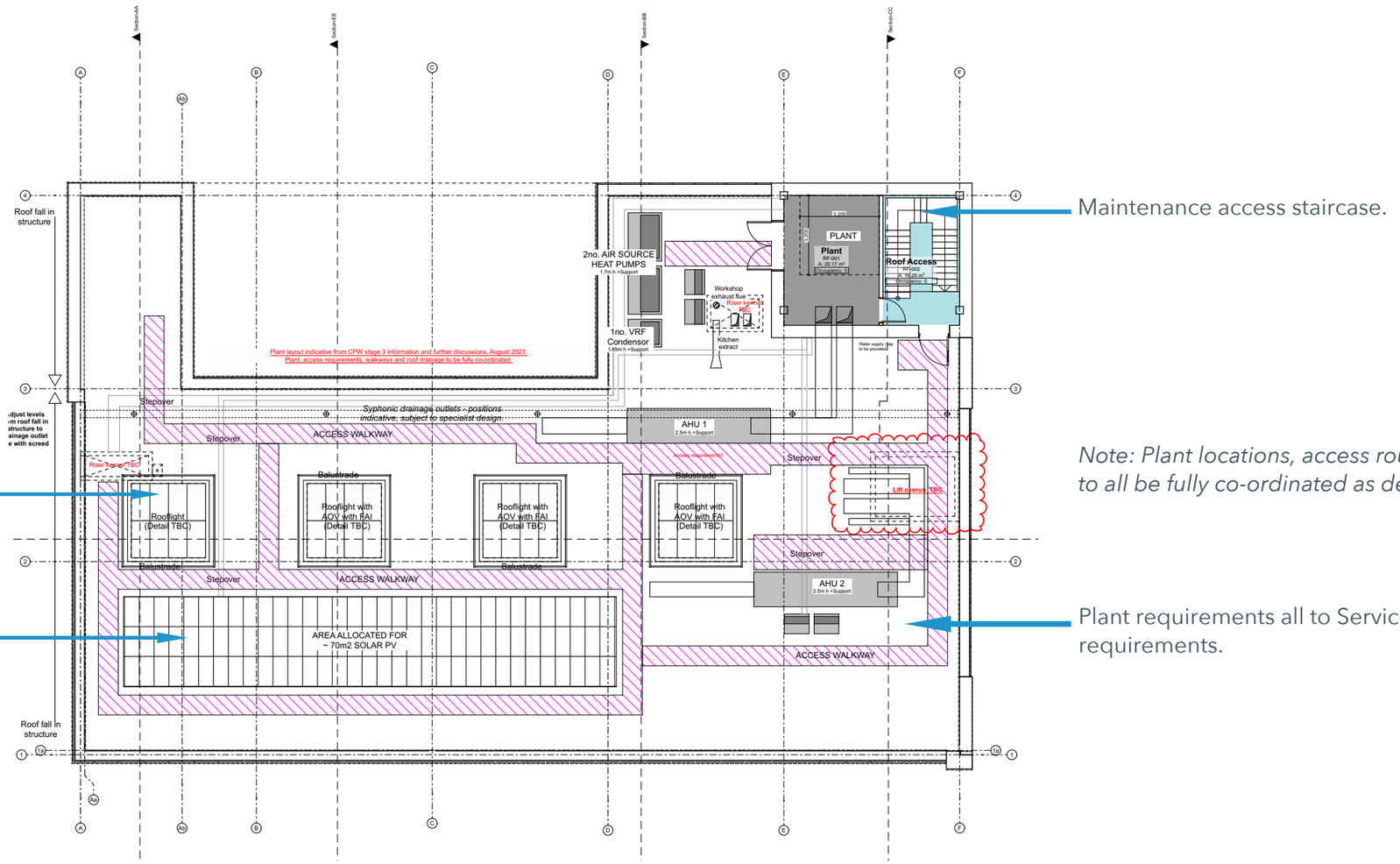
Internal glazed screens provide visual connectivity between spaces, and create a dynamic space that celebrates learning, provide passive supervision and connection.

Proposed GA Plan Third Floor

High level roof drains to main roof by gravity. Main roof and terrace to be drained via an internal syphonic drainage system - to specialist subcontractor design.

Rooflights providing daylight to the depth of plan / heart of the building, providing ventilation to the collaboration space, and emergency smoke venting.

Roof with PV array, with ballast and paved routes.



Maintenance access staircase.

Note: Plant locations, access routes, roof drainage, to all be fully co-ordinated as design develops.

Plant requirements all to Services Engineers requirements.

Proposed GA Plan Roof Level

4.6 PROPOSED ELEVATIONS

Elevational Treatment

Feedback, supportive of the massing, form, and appearance of the scheme, was received from the LPA as part of a pre-application submission.

Design Intent:

Provision of a high-quality solution that will contribute to the overall urban realm, enhancing the Thornton Road corridor, developed in response to the local site context and appropriate to address the nearby conservation area, while reflecting the technological advancements contained within.

A number of design concepts are envisaged:

- Simple palette of hard-wearing materials that reflects the industrial setting and heritage of the area - masonry as the core material, with a highly insulated external wall construction.

- Use of high quality metal rainscreen cladding to compliment and contrast with the masonry but drawing on a similar colour palette, giving the building an identify to stand out on its own.

- A regular, cost effective and flexible approach that draws on the proportions and architectural language of the area .

- Extensive glazing at street level to showcase activity.

- An articulated and welcoming entrance.

- Robust materials and mechanisms to support the security strategy for the building, providing a low maintenance solution.

The application of materials and façade articulation addresses the scale of the building within its context. Solid materials to the lower levels o the main frontage give way to lighter weight materials at the uppermost storey which wrap around and down to highlight and articulate the heavily glazed entrance area.

The fenestration pattern echoes a traditional mill building and supports the conservation area setting adjacent, while, the material selection, application and articulation, cladding, lighting, and bold shop frontage brings the building to a more technological advanced but complementary position.

The North facade has a strong frontage onto the busy thoroughfare that is Thornton Road, and will be visible on a key route into the city, and it is this frontage that is heavily glazed at showcasing activity. The facade is articulated by a series of planes in the facade, with material contrast and form provided by the cladding at high level and to the entrance area.

The fenestration pattern, planes, and materials work together to provide a feeling of verticality to the building. This is further developed through the scale of the cladding panels..

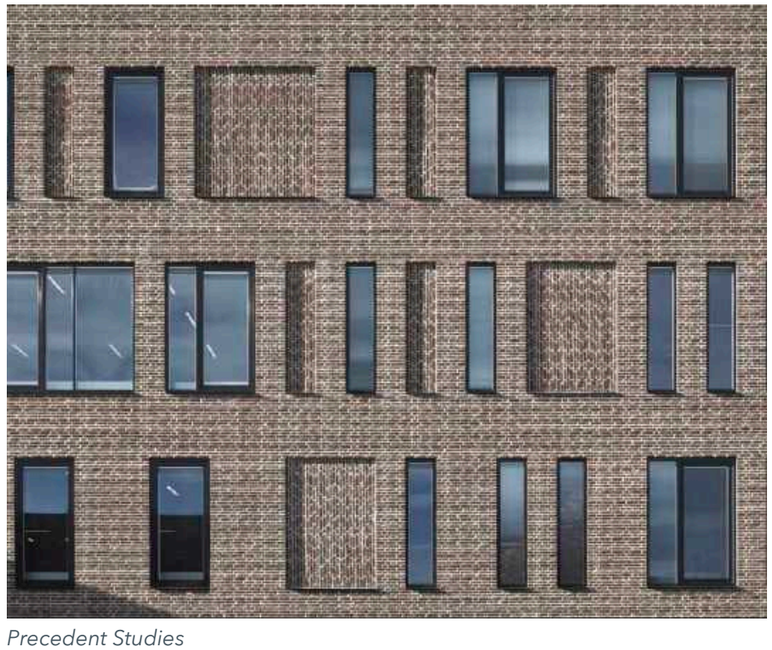
The finish of the large format cladding panels give the building a depth and interest creating vibrancy through how the light will fall and move across the facade - finished in a metallic ppc ‘anodised effect’ or a specialised steel treatment reflecting the light to give variation.

External lighting to the building will articulate the entrance after dark, and this together with the showcased workshops will form an attractive presence on the streetscape, further enhancing the urban public realm.

A warm colour palette is proposed to align with the stone context which will be subject to samples and further discussion.

The South facade has a regular rhythm drawn from context, is proposed as bookended in brickwork with a central area of metal cladding and draws material colours into glazed areas.

The East façade is a boundary condition and hence is free from fenestration, and so is simply articulated with recessed panels to



Precedent Studies

add interest. The College hope to develop the adjacent site if they are able to acquire it.

The West facade is primarily sheltered by the adjacent residential building is simply treated with limited fenestration towards the front of the building to avoid overlooking, with brick and metal cladding complimenting the overall building.

Rooftop plant provision is set back from the main facade and third floor terrace, and is partially concealed by a standard height parapet that also provides edge protection for access. Limited louvres to the South (as shown) support the ventilation strategy, otherwise all external plant is at roof level only. A photovoltaic array serves as a source of renewable energy.

Core Materials

As the surrounding context has a number of buildings finished in the warm stone of the area, the use of stone as the core material was considered, either new or reclaimed .

The scheme is made possible through DfE funding, and must work within the financial constraints associated with that funding. The use of stone / reclaimed stone would require an investment that sits outside of the funding parameters for the floor area allocation, and building budget.

Brickwork is therefore proposed as a heavy weight, modular masonry solution that will complement the context in tone and solidity, supporting the building's place in the urban realm within the budget and funding parameters.

This is supported by metal cladding with a light reflecctive finish to add life and vibrancy to the facade.

Secondary facades are simplified with the key focus on the Thorton Road frontage.

Precedent Studies

Rooftop plant including flue set back and partially concealed (locations to be co-ordinated.)

Staircase to roof for maintenance access.

Metal cladding contrasting with the brickwork, wraps down to highlight the main entrance.

The fenestration pattern, planes, and materials work together to provide a feeling of verticality and depth to the building, and is further supported through the cladding panel scale.

The finish of the cladding panels give the building a depth and creates vibrancy through how the light will move across the facade.

Areas for Building signage, both above the entrance and at low level approaching the entrance.

Brick facade creating subtle layered effect in response to traditional mill buildings' setting.

Facade articulated through depth of planes.

Non-combustable insulation to all walls as best practise.

Glazed large scale door into workshop for occasional vehicle access, maintaining street frontage.

PPC curtain wall providing 'shop front' to showcase activities within.

Highlighted and welcoming entrance area

Fenestration rhythm creating verticality.

High windows for daylighting. With glazing for solar and acoustic control.

Opening lights for user comfort control only (building is primarily mechanically ventilated due to processes and background noise levels.)

Proposed GA Elevation North

Visualisation Design Intent

Visualisation Design Intent

Rooftop plant including workshop exhaust flue set back and partially concealed (locations to be co-ordinated, note AHU to be relocated away from terrace to avoid overpowering terrace.)

Parapet around flat roof

External terrace as a social space - South facing and set away from Thornton Road. Noise levels will be suitable for a social space, however they would be considered high for a teaching environment.

Brick facade with recessed cladding panels for a simple articulation bookends the facade. The colour of the cladding is drawn into the glazed areas for connection of materials.

Large format cladding creates a subtle rhythm in response to traditional mill buildings' setting.

Facade articulated through complimentary materials.

Staircase to roof for maintenance access.

Non-combustable insulation to all walls as best practise.

Louvres incorporated into fenestration to support ventilation strategy.

Fenestration rhythm creating verticality.

High windows for daylighting. With glazing for solar and acoustic control.

Opening lights primarily for user comfort control, (the building is primarily mechanically ventilated,) however background noise levels at this facade are lower allowing for greater use of natural ventilation.

Proposed GA Elevation South

Visualisation Design Intent

Visualisation Design Intent

4.7 LANDSCAPE STRATEGY

Existing Site

The existing site is predominantly covered by the footprint of the existing Junction Mills building. The building sits on the boundary line to North (back of pavement), and East (adjacent car park site. A band of land to West and South was a path providing access, and is now scrubland as a result of becoming overgrown through lack of use.

The site is bounded by the beck to the South with a stone retaining wall, and a freestanding wall to the west in poor repair.

The site has suffered from misuse. The concealed area to the rear of the building has become a location for drug use.

A preliminary ecological assessment identified the presence of a number of invasive species on the site - Japanese Knotweed and Himalayan Balsam.

A bat survey has identified the presence of bats in the Junction Mills building but not to the beck wall.

As described the building itself is classed as category D condition accommodation and is in a state of disrepair, the site has had no take up when offered for sale, and the existing building is not suitable accommodation to house the facilities that the College requires. It is therefore proposed to demolish the Junction Mills building to facilitate a new build (demolition under a notice, not part of application).

Located on Thornton Road the site is well located for other College facilities and buildings, with the link to the centre of the campus provided by Westholme Street.

Limited public on street parking is available in front of the site in marked parking bays, while the adjacent site is currently a car park with used by the adjacent YMCA.

As a city centre location the site and the campus are well served by public transport links throughout the city, while the city is only a 15 minute walk from Bradford's main train station.

Landscape Strategy

The new centre proposed building footprint is configured to maximise the use of the site, incorporating the critical in demand ground floor facilities comprising of a large-scale workshop, and supporting facilities and an entrance area. As a result landscaped area is limited due to the nature of the site.

To suit the adjacent building lines the front of the building is positioned to back of pavement. To the East it sits on the boundary, and the College have an aspiration to acquire the adjacent (car park) plot for future expansion.

The remaining landscape to the rear and west side of the building will be primarily hard standing forming an escape route and providing an area / route for access and maintenance.

Mixed native planting will be provided as a border to the adjacent areas. The plant mixes, while limited, aim to protect and enhance site biodiversity and amenity value, and visually soften edges.

It is proposed to fence the sides of the site with a 2.4m high fence for security to prevent unsolicited access to the area. The fence is proposed as a security rated but visually open fence to not feel restrictive.

The site is bounded by the beck to the rear, where a balustrade

Bradford beck

Bradford beck wall

will be provided as edge protection, and the new route will be structurally separated from the existing beck wall by cantilevering above it. This arrangement avoids compromising the existing beck wall and impacting wildlife.

To the front of the building it is the building itself which forms the site boundary, and it is the building that will provide an accessible and welcoming facility aspect for the learners and visitors using the proposed building. The building has a strong presence on Thornton Road, with an open 'showcasing' aspect which will enhance the urban realm.

In order to access the building it will be necessary to undertake regrading works to the pavement and to the roadside parking bay area.

An external south facing terrace is provided at third floor overlooking the beck for additional amenity. There is the potential to provide seating and planting to this area at a future point. To the rear a solid parapet provides edge protection, while being topped with glazing to provide further enclosure but with connection.

Access Arrangements

A key driver behind the scheme is to maximise the ground floor accommodation and hence maximise the footprint on the site. To facilitate this approach support ancillary provision will be provided by facilities elsewhere on the College campus -

- Car parking facilities are provided in the Westholme Street car park, and in the main car park at the David Hockney building as well as other areas of the campus.
- Cycle parking (for 380 cycles) is provide at multiple locations including at the David Hockney building circa 400m walking distance.
- The site is well served by public transport links.

It is not intended to provide any form of parking or related ancillary facilities (showering etc) on site, but to use those elsewhere on campus.

The college has commissioned a Transport assessment and Travel plan to support this approach, which supports this application.

Pedestrian access is through the main entrance with level access from the pavement. The scheme links to the main campus area via Westholme Street.

Fire tender access is from the street frontage and a dry riser is located in the entrance return wall within the 18m requirement from where a tender will be able to stop.

Vehicular access into the building to provide the workshop with cars for teaching and learning is provided through large glass doors, maintaining the building frontage appearance. Although access will be infrequent this must cross the pavement. To suit the levels strategy the levels must rise for the access and hence a normal kerb separation can not be provided for delineation. A careful management plan will be required to support the functionality including the use of banksman when manoeuvring vehicles.

As part of the levels strategy to the pavement to provide the vehicle access it will also be necessary to remove, relocate, and regrade roadside parking spaces. The principals will need careful consultation with Highways as the detailed landscaping proposals are developed.

Several times a year the College will receive non operational vehicles by truck, at at these time the on street parking bays will need to be temporarily suspended to facilitate delivery.

Precedent - terrace planting / seating

Small scale deliveries will be made to the David Hockney building and brought down to the FTC by the College.

Site Zoning and Security

The site will be zoned into two parts: the front of the site will be formed by the building to back of pavement, which will have power assisted doors on an access control system. On entry the visitor / user is met with a welcoming reception desk and a set of security barriers on an access control system.

The rear and West part of the site will be located behind a secure fence line thereby controlling access. Lockable gates within the fencing will release in an emergency for egress.

Levels Strategy

The new building generally follows the footprint of the Junction Mills building hence it can be considered a nominally flat site connected to pavement level. The land to the rear of the building is lower by approx 600mm.

- Back of pavement AOD 102.6m.
- Identified through the flood risk assessment and co-ordinated with assess requirements the ground floor FFL has been set at AOD 102.75m. This level allows for access while not requiring flood resistant construction as the level sits above the flood risk datum.

To the front of the building the pavement will be regraded.

- A gradient of <1:20 will be provided to access the main pedestrian entrance.
- Pavement cross falls will be a maximum of 1:40.
- The gradient of the vehicular ramp will vary from 1:40 to <1:20 across the pavement and the parking bays.

To the rear of the building typically the ground level will be 150mm affl as best practise, and will rise at <1:20 to meet the access / egress doors. Staircase 2 egress is 500mm below the main ground floor level to allow egress below the staircase half landing and external steps will be provided externally to regain the main level.

To the rear of the building the access / egress route will be raised above the natural levels, and cantilevered over the existing beck wall construction keeping old and new structures separated.

All routes will be part M compliant.

Hard Surfaces

The proposed paving will be a coordinated mixture of paving blocks to highlight the main entrance area, and tar-macadam to the rear escape route. Material selection will be in line with the drainage strategy. Colours will be chosen to complement the building materials.

Planting Strategy

The planting strategy, although limited, will focus on native species and enhancing biodiversity.

Structured planting (shrubs) will be used to create borders.

Biodiversity

The existing landscape is of limited value, and is compromised with invasive species. It is proposed to eradicate the invasive species as part of the scheme.

The site area is limited and hence there is limited opportunity to add biodiversity value to the site. The roof area accommodates plant equipment, rooflights, and a PV array with limited remaining area remaining.

The scheme includes limited areas of planted borders which will be planted with native species.

The ecologist has undertaken a Preliminary Ecological assessment and a Biodiversity assessment which are provided to support this application.

To provide a biodiversity net gain it is intended to ,provide enhancement offsite on the adjacent Garden Mills site, where the building is currently being refurbished, which has areas of woodland that could be enhanced through the removal of invasive species.

The ecologist advises that if the off-site, 0.046ha of woodland (located within the Garden Mills site boundary) is enhanced and no landscaping is included within the Junction Mills proposals, the development will result in a net gain of 0.15 habitat area units, which is a total net gain of 84.29% biodiversity area units. This is based on the woodland being enhanced from poor condition to moderate condition via the removal of invasive non-native species supported by supplementary planting of native shrubs and an appropriate regime of woodland management, which will aid in improving structural diversity.

Phasing and Construction Phase

During construction a site compound will be established to separate the site from adjacent routes. The priority will be to make sure that the site is secured from any unauthorised access.

The College currently intend to use their Westholme street car park (over the bridge) as a welfare area, while they have agreed the use of the adjacent car park area during the construction phase which is intended for use as a set down and materials compound.

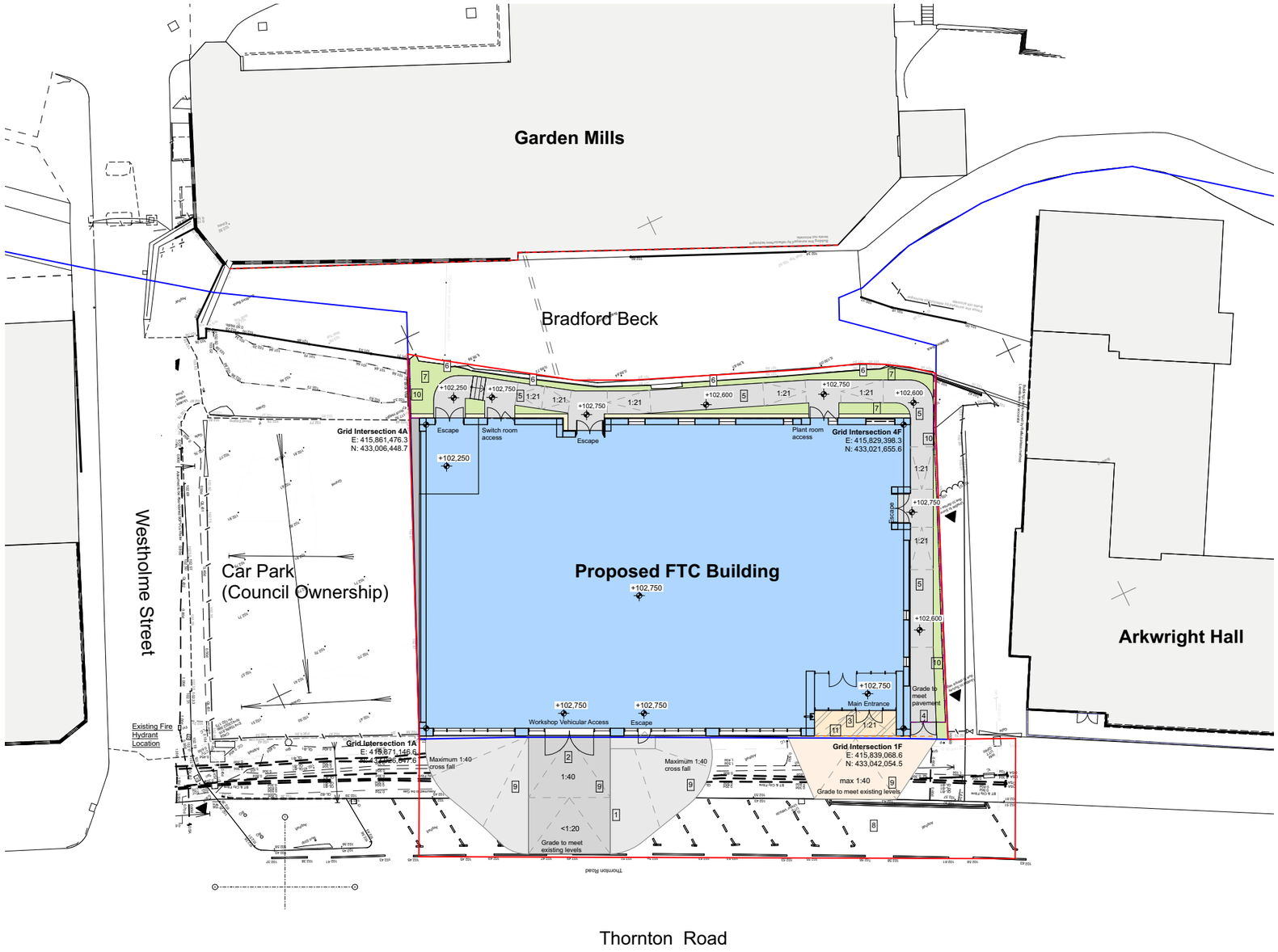
A construction traffic management plan will need to be developed.

To undertake the works it will be necessary to close the pavement and take the street side parking out of use for the construction phase. A temporary protected pedestrian route will need to be created. Careful consideration will be needed to separate vehicle and pedestrian traffic.

The contractor and the design team are used to working on constrained sites and all care will be taken to minimise disruption and support smooth running of the construction works with safety of all involved as a priority.

Phasing:

- Set up a secure site compound around location of the proposed building. Demolish and clear the site in preparation for the construction of the building.
- New build construction phase.
- The external landscaping is completed.



Proposed Site Plan

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5.0 DESIGN STRATEGIES

BOND BRYAN

FUTURE TECHNOLOGIES CENTRE, JUNCTION ROAD, BRADFORD COLLEGE

DESIGN & ACCESS STATEMENT

5.1 DEMOLITION

Demolition of the Junction Mills building is to be undertaken as an enabling package of work. This has been fully priced as part of the Stage 1 (of 2) tender.

Once the building is demolished further site investigation can be undertaken to further inform the civils and structural strategies, and associated architectural design and co-ordination.

The impact on programme of aligning funding, cost and design have required a fresh approach to the demolition.

Demolition process will be progressed under a demolition notice rather than through this planning submission, to allow this to be advanced expediting site investigation information which will feed into the developing technical design mitigating design and programme risk.

5.2 FIRE

Key items:

- The fire strategy is based on the requirements of BS9999.
- Simultaneous evacuation is required with the adjacent College owned Garden Mills building due to the area of unprotected facade on the South elevation.
- Fire tender access is only available to the front facade, and hence a dry riser is incorporated into the design to ensure full access for the fire service. This is accessible directly from Thornton Road.
- The highest occupied floor sits 13.8m above back of pavement.

5.3 ACOUSTICS

Apex Acoustics have undertaken a background noise survey, noise impact assessment, and have developed design proposals for the scheme. developed strategies and proposals for the Stage 3 design and their detailed report is a supporting document to this application. The acoustic performance requirements have been based on BB93.

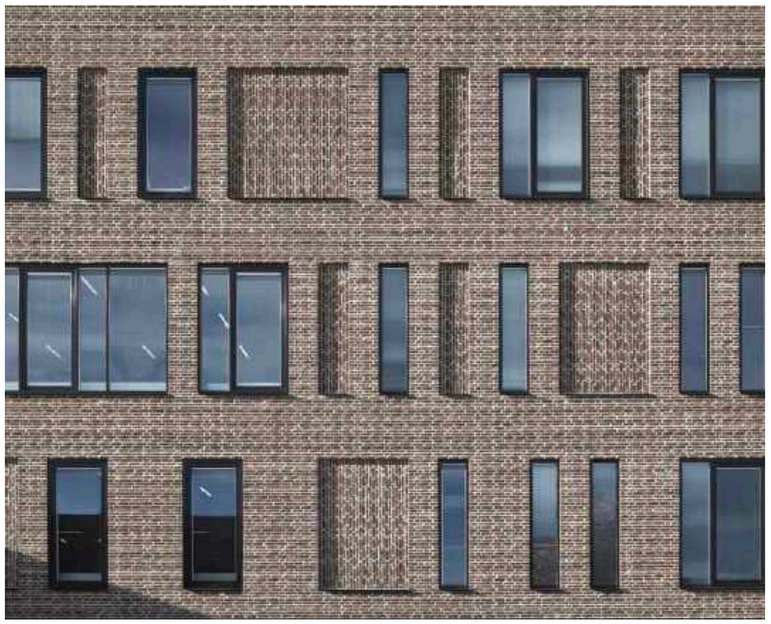
Given the location of the site on a busy thoroughfare background noise levels are high which has implications on the scheme.

- Performance requirements for the external fabric are high to maintain suitable noise levels internally. This impacts on the glass specification where enhanced thicknesses are required to meet the performance requirements.
- Building ventilation is primarily mechanical as natural would compromise the internal noise levels or a dedicated attenuated facade would be required with notable impact on construction, wall thickness, daylighting and cost.

The external terrace is to the rear of the building and partially shielded from the road. The noise level on the terrace will be suitable for a social space, however considered too high for a teaching space.

Internally the workshops will produce high noise levels .This will need further assessment by the Acoustic Engineer once all the equipment sound outputs are fully understood to ensure the correct internal noise transfer mitigation strategy is adopted, whether that is mass barrier ceilings or floors (screed).

Materials (External) - Cladding



Materials (External) - Brickwork

5.4 CIVILS & STRUCTURE

The proposed strategy and co-ordinated Stage 3 design has been developed by Curtins structural and civil engineers.

The team considered a number of structural solutions, especially regarding the balance of maximising the flexibility of the workshop spaces by removing columns versus costs, and these were tested and the design validated.

The proposed strategy is:

- Steel frame for speed of erection/value for money
- A ground-first floor height of 5.55m – ensuring a minimum of 4.3m clear across the whole of the ground floor workshop which is sufficient to allow a car ramp to be used anywhere.
- Minimise columns in the workshop in order to maximise flexibility. Creating a true column free ground floor would require beams c 2m in depth – this would increase the height of the building required to maintain the clear working height and add significant cost. The proposed solution therefore includes 2 columns within the workshop.

To achieve this the design incorporates:

- Steel frame
- In situ concrete slab to ground floor
- Metal concrete composite upper floors and roof.
- Deep transfer beams over the main workshop on gridlines 2 and 3 from B to D.

The Drainage strategy for the scheme is provided as a supporting document to this application - 'Flood Risk Assessment and Drainage Strategy.' This includes proposed levels, and the modelled proposed flow rate including the 1 in 100 year event plus 30% climate change. Trade effluent requirements have been discussed ore-application with the LA.

A ground floor finished floor level of 102.75 has been agreed, providing a level for flood mitigation without the need for flood resistant construction whilst allowing appropriate access to the building.

5.5 BUILDING SERVICES

The proposed building services strategy has been developed by CPW. Careful consideration was given to the optimum strategy for the building services, and options evaluated by the College team which led to a proposed strategy which has been developed and tested.

Considerations:

- In-use carbon emissions.
- Operational costs.
- Operational complexity/maintenance.
- User comfort.
- Site specific environmental factors, including the proximity of the site to a busy road.
- Future flexibility and adaptability of the spaces
- Specific room uses.

Proposed strategy:

Ventilation -

- Predominately mechanical extract to teaching rooms as there are noise and air quality issues with natural ventilation solution due to location.
- Heat recovery to improve energy efficiency.
- Central plan naturally ventilated via roof lights.

Heating/Cooling Strategy -

- Fabric first approach - high levels insulation/air tightness to reduce energy loss.
- All electric - Air source heat pumps rather than gas fired solution, to reduce carbon.
- Generally simple heating via radiators to smaller spaces.
- PV's on roof to support electric only solution.

Photovoltaic panels

Visible plant

External plant including two air handling units will be primarily concealed on the roof, set back from the roof edge behind a parapet. An extract flue rises to 1m above the highest point of the building. Limited louvres within the fenestration on the rear facade to serve MVHR units and support the ventilation strategy.

5.6 SUSTAINABILITY

In line with the Government's 2050 Net Zero target, reducing their carbon impact is a key driver for the College.

Aim:To deliver the most sustainable solution within the available budget, and use the building as a learning tool.

Core design principles and approaches:-

BREEAM

Deliver BREEAM Very Good Standard. A Breeam Assessor is on board and review is ongoing with a view to not missing out on the early stage credits, where although the principles may have been included in the design, as accreditation was not targeted the evidence has not been compiled.

A Fabric First Approach

- Stepped approach to reducing energy requirements and carbon footprint:
- Careful consideration of low/zero cost passive measures where practicable.
- Adopting a fabric first approach, including air tightness and insulation looking to improve upon Building Regulations where practical.
- Integrate energy saving building controls and energy systems. -including the use of air source heat pumps rather than traditional boilers.
- Specification of low carbon & locally sourced materials where possible including consideration of whole life cycle and end of life/ recycling., As well as site wastage.
- Following optimisation of the above, consider the merits of different low or zero carbon technologies such as photovoltaic, considering the maximum benefit and pay back periods.
- As far as the budget allows, seek to integrate innovate and good practice design measures related to wider sustainable design.

5.7 SUSTAINABLE DESIGN PROPOSALS

Building Fabric:

- Targeting very high levels of air tightness.
- Increased insulation over building regulations.

Heating & Ventilation:

- The central heating system will comprise of 2No. ASHPs, located on the roof – All electric system based on the use of air source heat pumps to reduce the carbon footprint when compared to other alternatives, i.e gas fired boilers.
- LTHW system to operate at low temperatures.
- Mechanical ventilation heat loads for tempering cold external fresh air will be minimised by use of high efficiency heat recovery devices within the mechanical ventilation units. 2No large roof mounted air handling units will be used to ventilate the 2nd and 3rd floor classrooms and offices, these air handling units will be provided with DX heating and cooling coils to trim the supply air temperature.
- Mechanical ventilation system will be zoned, allowing for controlled levels of ventilation to deliver high levels of user comfort whilst avoiding excessive heat loss via use of heat recovery systems.
- Occupancy based control of ventilation systems to allow systems to operate only when required.
- Mechanical Heat Recovery (MVHR) Units utilised within the project. MVHR units, in areas such as the WC areas, to operate in trickle mode until occupancy is activated via PIR occupancy-based control.
- Air Handling Units (AHUs) located on the roof to be complete with high efficiency plate heat exchangers to recover heat from the discharge air.
- Natural ventilation provided to second floor breakout / collaboration space.

Automatic Controls:

- Building Management System (BMS) to enable monitoring and control of usage to optimise energy efficiency - BMS will provide monitoring and control of central heating plant, heating zones, and ventilation plant. All other building services systems will be proprietary standalone control systems from equipment manufacturers, including temperature / CO2 of spaces, and fan speed. The standalone systems will connect to the BMS so that start – stop signals can be sent for high level operation in line with occupancy times, with status and fault conditions being monitored.

Lighting:

- Maximising natural daylighting through careful consideration of room plan depth and fenestration/ windows and use of central atrium/rooflights.
- Daylight dimming has been including in the project to maximise the energy efficiency.
- Lighting controls are an integral part of the lighting system with both absence & presence detection included in all areas of the project.
- All the lighting works on the same system so both the daylight dimming and absence/ presence detection works together.
- LED lighting used throughout.

Water:

- Specification of low use WC fittings.
- Local metering.

On-site Renewables:

- Roof mounted photovoltaics, 70m2 gross area, in order to ensure carbon neutral development is achieved.

5.8 ENVIRONMENTAL

A number of surveys and studies have been commissioned to address the environmental constraints of the site and inform the design parameters of the scheme, including trial pits, asbestos survey, background noise survey, a preliminary ecology assessment, bat survey, and air quality assessment.

The design has been developed to reflect the findings and ensure that the development does not adversely impact its neighbours and the surrounding environment.

Noise break out

As identified in the acoustic section a detailed acoustic strategy is in place to ensure that the development does not adversely effect the nearest sensitive noise receptor which is the residential accommodation to the West of the site. The building fabric and the rooftop plant will be designed and attenuated to limit noise output from the building.

The background noise survey and acoustic strategy report are provided as supporting information to this application.

Air Quality

An air quality assessment has been undertaken and is provided as supporting document to this application.

The Automotive Workshop requires a specialist Local Extract Ventilation (LEV) system. The LEV exhaust system ductwork will run at high level within the workshop to serve LEV exhaust hose reels, with an LEV exhaust extract fan, located at high level, ducting to atmosphere at roof level for discharge requirements as a flue rising to circa 1m above the highest point of the building. The LEV exhaust fan will be complete with a form of air cleaning (filtration) and collection.

Energy

The scheme makes use of air source heat pumps and an area of Photovoltaic panels is provided to the roof.

Flood Risk

A flood risk assessment has been undertaken (provided as supporting document to this application,) and the ground level of the building has been set to facilitate both vehicle and pedestrian access into the building, while not requiring the inclusion of flood resistant construction.

Beck adjacency

Ground levels to the South of the building will be raised facilitating egress from the building and allowing the area to the rear adjacent to the beck to be constructed independently of the existing beck wall minimising impact on the local environment.

Bats

Bats are present in the Junction mills building. There presence will need to be addresses by licence prior to demolition.

Invasive Species

The invasive species identified on the site will be eradicated as part of the scheme in line with best practise methods.

Biodiversity

As detailed in the Landscape section the scheme will provide a biodiversity net gain through ‘off site’ improvements at the adjacent Garden Mills site currently being refurbished by the College, as given the limited nature of the site there is little scope for improvements on site.

A biodiversity assessment has been undertaken and is provided as supporting document to this application, and recommendations will be followed.

5.9 SERVICING - WASTE / DELIVERIES

Refuse

A bin store is not included as part of the scheme. Refuse will be collected daily by the College and taken elsewhere on campus.

Hazardous Materials

The College have a requirement to store waste oil to DSEAR.

Deliveries

Small scale deliveries will consist of consumables such as toilet paper, copy paper etc, and also Catering provision to serve the small Cafe Servery. These small scale deliveries deliveries will be delivered centrally on the main campus and brought down to the building independently by the College.

Large scale deliveries will consist of cars by truck including non running vehicles which will have to be manoeuvred into the workshop. For truck deliveries it will be necessarily to temporarily suspend the parking bays to the full frontage, limited to the duration of the delivery and carefully managed by the College and in agreement with Highways.

Biodiversity precedent

5.10 ACCESS / HIGHWAYS

Pedestrian access is provided to the main entrance, which is articulated with curtain wall glazing.

Large scale vehicle access doors are provided to allow access for vehicles into the ground floor workshop. Access will typically be required once a month. Additionally, 2-3 times a year, vehicles will be delivered by truck, some of which will be non-runners, as the College has agreements in place to secure vehicles of this nature.

Please note that the doors are for vehicle access only. Suitable extraction will be provided internally. The doors will not form part of any ventilation strategy.

The ground floor level is marginally raised over the existing building and so the pavement will be regraded to suit the building levels, providing a 1:21 approach to the pedestrian access and maximum 1:40 cross falls. The vehicle approach will be regraded from the back of the roadway to the building to ensure a maximum 1:40 cross fall across the pavement width and a 1:20 gradient across the former parking bays giving a shallow approach to the roadway itself.

To facilitate vehicle access to the ground floor workshop it will be necessary to remove limited roadside parking bays on a permanent basis. This can be partially mitigated by incorporating car parking bays into the area by the existing gates towards the North-West corner of the site.

Internally a combined person / goods lift is provided to move rigs and equipment up the building. A direct route is provided from the ground floor workshop to the lift.

5.11 SECURITY

A number of security measures will be put in place to support the facility and ensure the safety of personnel and property.

The site will be fully fenced to prevent unauthorised access from the street to the rear of the building.

CCTV will be provided both externally and at key locations internally.

The main entrance, and internal lift, will be provided with access control and security barriers will control access past reception.

Access control will be provided to all but stores and ancillary spaces internally.

The building fabric, windows, doors, glazing, will meet suitably enhanced security performance to agreed ratings, and an intruder alarm will be provided.

A Security Needs Assessment has been prepared by CPTED UK to provide recommendations to the design team for measures to include in the design. This was prepared to support the Breeam submission however the recommendations have already been included in the scheme as best practise.

The vehicle doors are provided as large scale glass doors to maintain the glass frontage. While these doors have certification for an appropriate rating at a smaller scale they have not been tested at the size required. Further assessment will be required with SBD, the ALO and CPTED UK as given that the doors will be ‘in the spirit of’ the requirement the lack of testing at this scale can be mitigated by other measure such as local CCTV.

5.12 CLEANING & MAINTENANCE

Cleaning and maintenance strategies have been put in place. A number of areas for further review have been identified.

Full parapets are provided for edge protection. Typically access for cleaning / maintenance is from the adjacent level, via a MEWP or with the use of a long-pole water system.

MEWP

Nissan Leaf - Charging

5.13 FUTURE PROOFING

Flexibility & Adaptability

A number of devices have been employed to ensure that the scheme has the ability to adapt and change with future need:

All teaching areas are set within a 7.8m deep and 7.1m wide grid, while the depth of the centre of the plan differs. General teaching space sizes are standardised at 50-54m2. This is half the size of a specialist lab, Classrooms are arranged in pairs / groups. In the future spaces can be combined or divided to suit future need.

Spare capacity has been included in the design occupancy for fire egress and toilet provision to allow for additional teaching groups at a later stage.

Window sizes have been standardised as far as possible, providing the same number of windows per bay.

Services are zoned to further facilitate adaptation needs.

The third floor external terrace is finished with paving only, and is provided with lighting and Wifi coverage. At a later date the College may look to enhance the space with large planters and seating. On this basis the loading required has been factored into the structural design to allow for adaptation.

The site adjacent to the proposals is currently empty and used for car parking. The adjacent property uses the site for parking. The College have commenced negotiations with a view to acquiring the site. This could be used for parking, amenity space, an enhance entrance or a building extension with additional teaching facilities. At this stage the building has been designed to include steelwork and layouts that allow for future connectivity at ground and first floors to 'future proof' the design to support any future acquisition of the site.

5.14 CONSTRUCTION IMPACT MITIGATION

Design

The designers have specified / will specify robust details and quality materials, consistent with the project budget and brief throughout the building.

Ongoing co-ordination of design elements including structure, services, materials and finishes will ensure that the project information is produced to consistent standards and that build ability is embedded in designs to support minimal construction programme, to minimise material waste and environmental disruption.

Long-term maintenance and health and safety issues will be considered as an integral part of the design process.

Hazard elimination assessments, CDM regulations, and the development of a Health and Safety file, are being reviewed by the Design Team's Principal Designer. The Design Team also recognises that the project design and specification directly impacts on the maintenance burden placed on the client.

The detailed planned maintenance programme will be the responsibility of the College, since many factors beyond the influence of the Design Team will influence the annual maintenance requirements. Both the overall design and the specification will be considered to offer the client lowest maintenance and most robust building within the available budget. Access solutions for the maintenance of the internal and external building fabric have been put in place.

Construction

Through the procurement process the selected contractor will be required to be committed to managing their construction sites in a responsible manner, which comply with, or exceed, legal requirements and best practice guidelines. Consideration for the general public / local residents will be paramount and the contractor will be required to be a good neighbour to all those who interface with their site operations.

Contractors will be appointed with due consideration of experience, track record and financial stability. Criteria considered in selecting the contractor will include:

- Health and safety record,
- Quality control and management procedures,
- Membership and implementation of third party accredited considerate contractor scheme,
- Environmental policy and Third party accredited environmental management system,
- Equal opportunities, training and development policy.

Design specifications will require contractors to submit method statements, ensuring that due consideration is taken of the environmental site needs, and the needs of neighbouring landowners and occupiers. Typically this would require limitations on site traffic, site hours of operation, site noise and waste management, and account of the ecological survey findings into their construction methodology and programming.

CONSIDERATE CONSTRUCTORS ASSOCIATE

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The following sets out how the contractor could be required to mitigate the impact of the works on the amenity of local residents:

Considerate Constructors

• The site will be registered with the Considerate Constructors Scheme and audited by them on a periodic basis.

Keeping Residents Informed

• A strategy will be agreed for the contractors to keep residents informed of operations. For example, this may be through letter drops to local residents on a periodic basis, to inform them of their operations and anything that may affect them, and the provision of a contact number so that any concerns can be raised with a member of the team.

• Where possible opportunities will be identified for local residents and schools to visit the site and see how the construction process works, for education purposes and promotion of understanding with neighbours.

Site Security and Welfare

• The site will be surrounded by a minimum 2.0m high solid hoarding wherever possible. There will be controlled access points and as well as viewing locations for the general public.

• The site will have a security presence and public protection measures.

• Site welfare facilities will be provided in a neat and orderly manner to ensure operatives have everything they require within the site confines. This will be implemented and then regularly audited. It is anticipated that the College will make use of their Westholme Street Car Park for the Welfare facilities, while an agreement has been reached to make use of the adjacent Council car park site for the construction phase potentially as the materials and equipment compound.

Hours of Work

• With respect to works that would be audible at the site boundary, the intent is generally to operate the site regularly within set hours, to be agreed with the LPA. Due to the nature of the construction process there will be times when they will need to depart from this for certain operations. On those occasions, the proposals will be discussed with the Planning Officer and / or the EHO in advance in order to reach agreement prior to proceeding.

Traffic Management and Highways

• A traffic management plan will need to be agreed that clearly sets out construction vehicle routes to and from the site, access and egress to/from the site, management of deliveries, contractor parking arrangements and plant and pedestrian routes. This will include requirements in relation to the pavement, and adjacent roadside parking bays, in terms of protecting or rerouting pedestrians, and temporary suspension of parking bays.

• The roads surrounding the site will be kept clean and free of debris, through the use of road sweepers on an as-required basis. At times of dirty operations or poor weather the contractor may operate a manned jet wash to clean the wheels of vehicles exiting the site.

Air Pollution

• The contractor will be required to ensure that their demolition and construction operations do not generate dust, fumes or emissions that would cause nuisance to neighbours, or infringe any legal requirements. Damping down will occur during operations that are likely to be dusty and where necessary cover skips.

Light Pollution

• The construction process dictates that external lighting is implemented for safety and security reasons on the site. This will be undertaken with a view to ensure that this does not present a nuisance to site neighbours and will switch off lights wherever possible outside of working hours.

Noise

• Operations will be managed to ensure that unreasonable noise levels are not generated. A noise meter may be located on site to enable site management to carry out periodic checks on an as- required basis.

Vibration

• Consideration will be given to the potential effects of vibration in construction planning.

Water Pollution

• Obligations in respect of water pollution will be managed, with particular consideration to the adjacent beck.

Waste Management

• A Site Waste Management Plan will be operated, which will include providing appropriate segregated skips for all waste.

Operative Briefings

• Most contractors operate a system of 'Environmental Toolbox Talks' to brief all operatives before work commences on site and at regular intervals. These ensure that at all levels within the team everyone understands how they are expected to operate or behave in respect of important areas such as the following:

- Water pollution - Nuisance (including noise, dust, light etc.)
- Waste Management
- Silting
- Spill Control
- Bats
- Washing plant down
- Waste duty of care

6.0 ACCESS PROPOSALS

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FUTURE TECHNOLOGIES CENTRE, JUNCTION ROAD, BRADFORD COLLEGE

DESIGN & ACCESS STATEMENT

6.1 ACCESSIBILITY & INCLUSIVITY

A key objective of the proposed Future Technologies Centre is to create a highly accessible and inclusive facility that will:

- Showcase the changing nature of the automotive and engineering industries - breaking away from traditional images of dirty workshops.
- Create welcoming facilities that encourage and support greater diversity in the student cohort.
- Ensure there are no physical barriers to access.
- Include spaces that support a variety of teaching and learning styles and activities.
- Ensure there are no physical barriers to access.

As developed these proposals have been designed to meet the requirements of Approved Document M and those elements of the Equality Act 2010 covered by it, as well as the guidance set out in BS8300. As designers we will work with the approved inspector to ensure that these regulations are met.

However compliance with Equality Act 2010 will need to be ensured by the service provider. In this case this is the College that may choose to address some requirements through management solutions as much as they can by design.

In addition the detailed design will continue to be developed with the College users and specialist accessibility advisors to seek to maximise accessibility and inclusivity for all users.

The design includes a number of elements to support the goals of accessibility and inclusivity:

- Ensure cross-falls to the pavement regrade are a maximum gradient of 1:40.
- Ensure all external access ramps are at less than 1:20.
- Level thresholds to all entrances/exits.
- Power assisted doors to the main entrance.
- All entrance doors that are fully glazed shall incorporate manifestations.
- Horizontal circulation maintained on the same level with circulation sufficiently broad for two-way wheelchair user traffic.
- Cross- corridor doors not on secure lines are re held open during day-to-day use, and close only in the event of fire.
- Vertical circulation for able-bodied and ambulant disabled users.
- A passenger lift for users with mobility issues.
- All doors to have sufficient clear opening width for wheelchair users and all lobbies shall provide enough manoeuvring space for wheelchair users. Lifts shall meet the dimensional requirements of Building Regulations approved document M.
- Provision of accessible reception desks, kitchenette provision.
- Provision of adjustable furniture to designated areas.
- Integration of hearing loops etc.

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- Accessible and gender neutral individual WC's provided on each floor.
- Inclusion of an hygiene room to a Changing places standard.
- Simple design layout to aid ease of way-finding.

As part of Stage 4 careful consideration will be given to the interior design including use of colour and graphics/signage to support ease of navigation within the building.

An important part of the feedback on Stage 3 will be for the College to confirm any requirements over and above building regulations/Part M to meet the specific needs of the users.

The College are to confirm if the lift is to be designed to be used as part of their fire evacuation strategy for users with mobility issues.

7.0 SUPPORTING INFORMATION

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FUTURE TECHNOLOGIES CENTRE, JUNCTION ROAD, BRADFORD COLLEGE

DESIGN AND ACCESS STATEMENT

7.1 SUPPORTING INFORMATION REFERENCE LIST

This Design and Access Statement to be read with the following supporting information:
Application forms and Planning Statement
Architectural / Landscape Drawings
Heritage Statement
Land Contamination Assessment (Phase 1 SI)
Flood Risk Assessment and Drainage Strategy - Curtins
Noise Impact Assessment - Apex Acoustics
Air Quality Assessment (exposure assessment) - Accon UK
Preliminary Ecological Appraisal including Biodiversity Survey and assessment - RSK
Transport Statement
Travel Plan

THE SCHEME CREATES AN EXCITING OPPORTUNITY FOR THE COLLEGE TO CREATE A HIGH-QUALITY TEACHING AND LEARNING ENVIRONMENT WHILE CONTRIBUTING TO THE URBAN REALM AND LOCAL COMMUNITY.

Visualisation Design Intent

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