

**ATMOS PROJECT, TOTNES
BRUNEL BUILDING REFURBISHMENT & EXTENSIONS WITH NEW BUILD
ENERGY CENTRE**

EMPLOYERS REQUIREMENTS FOR STAGE 1 TENDER SUBMISSIONS

Client: Totnes Community Development Society (TCDS)

Date: April 2019

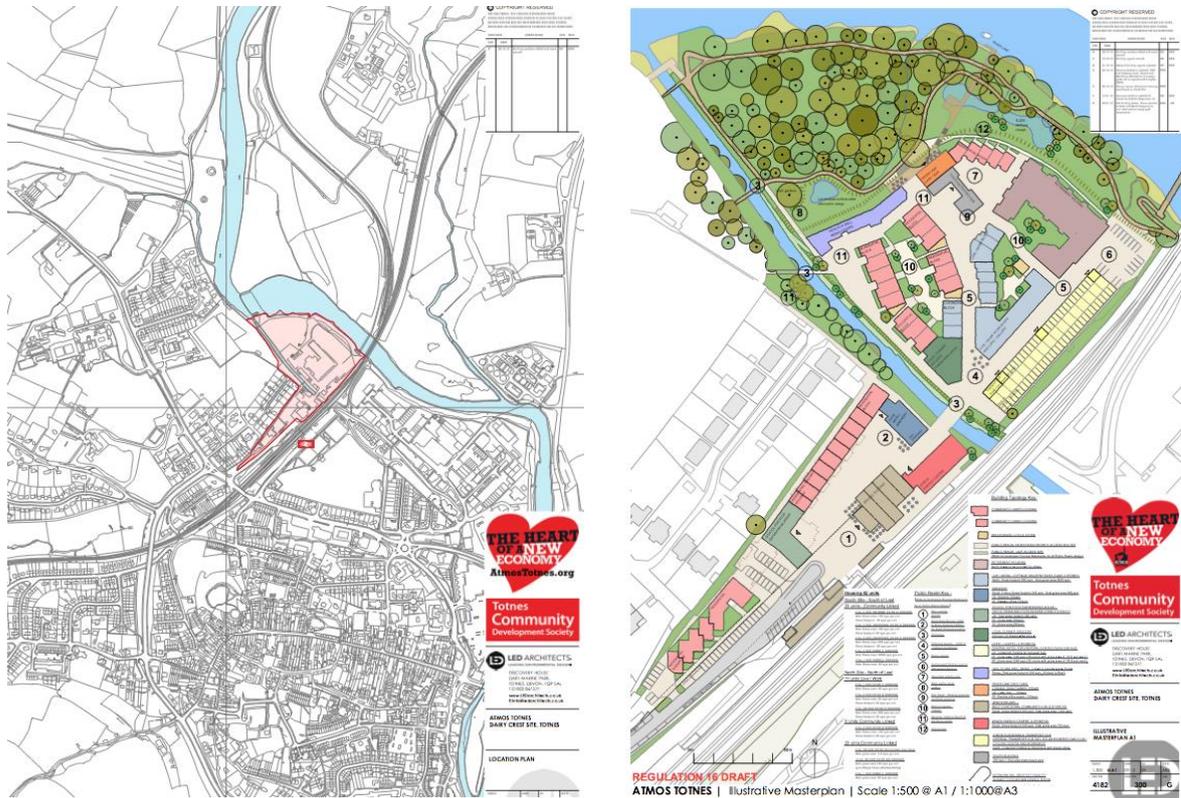
Revision: T5

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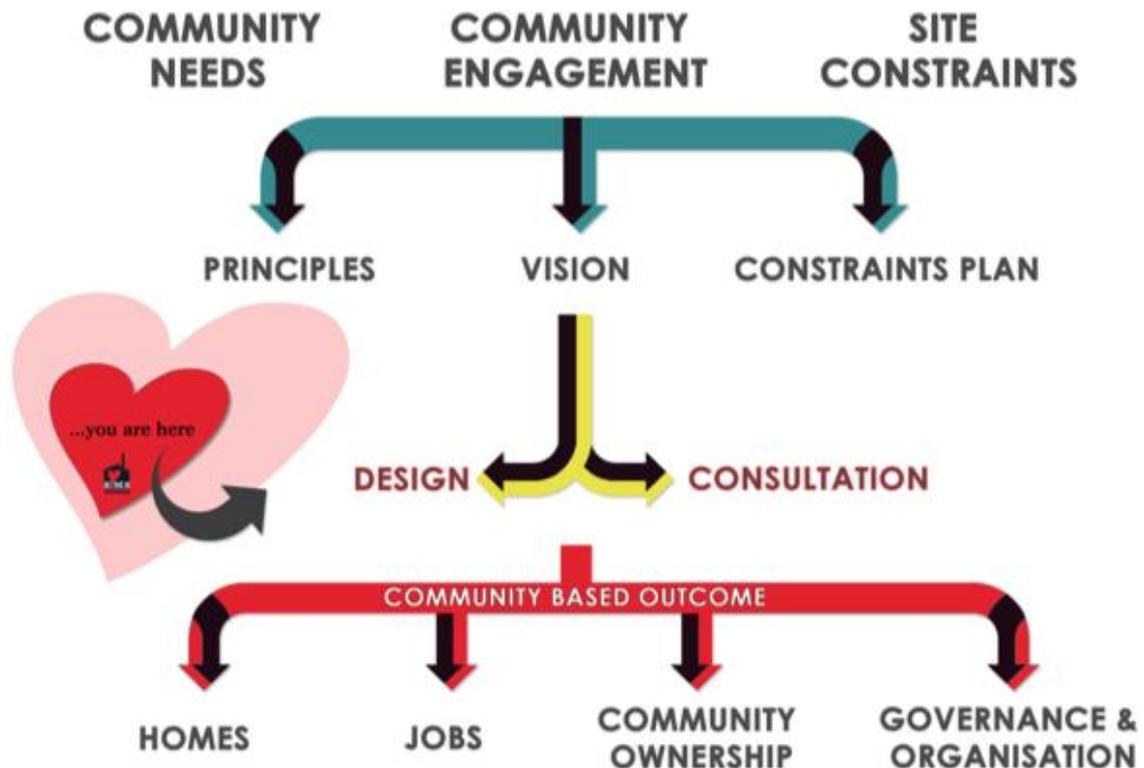
1. INTRODUCTION

Atmos Totnes is a community led site ownership and design process leading to the procurement of the old Dairy Crest Site in Totnes. The site is the redundant dairy and creamery industrial site on the north west edge of Totnes adjacent to the River Dart, existing woodland, the dart weir, the main railway line and existing housing.



Location Plan and Atmos Totnes Site Masterplan

A community led consultation process informed a scheme concept design and led to a Community Right to Build Order (CRtBO), which is being managed by Totnes Community Development Society (TCDS). TCDS is a not for profit, Charitable Community Benefit Society, which is acting on behalf of the Totnes Community. The name Atmos Totnes comes from the site's connection with Brunel's Atmospheric railway and the need for a positive response to climate change.



Atmos Totnes Community Engagement Process

Atmos Totnes has consent through a Made Community Right to Build Order (CRtBO) to develop the site to provide a range of residential, community and associated uses. CRtBO is equivalent to planning permission.

The proposed Brunel Building refurbishment & extensions with new build energy centre – the scope of these Employers Requirements document – form a key early phase of the wider Atmos Totnes scheme. The works include: the demolition and clearance of structures on the South side of the Atmos Totnes site, establishment of drainage infrastructure, the construction of a temporary roadway across the South site, the refurbishment of the Grade 2 listed Brunel Building, the construction of the contemporary sunroom extension and the glazed connecting link to the construction of a new Energy Centre building as shown and described in the tender drawings.

2. PROJECT TEAM

Employer: Totnes Community Development Society (TCDS)
 Project Management: Totnes Community Development Society (TCDS)
 Architect & Lead Consultant: Andrew Kirby Architects (AKA)
 Mechanical, Electrical & Public Health Engineering: TBA
 Structural Engineering & Foul Drainage: PCA Consulting Engineers (PCA)
 Ecology: Tor Ecology (TE)
 Landscape Design: Andrew Kirby Architects (AKA)
 Ground Investigations: John Grimes Partnership (JGP)
 Flood Risk & Surface Water Drainage: John Grimes Partnership (JGP)
 Demolition Consultants: D3 Consulting Ltd (D3)
 Cost Consultant: Mace

CDM Principle Designer: Andrew Kirby Architects (AKA)
Historic Building Consultants: Holland Heritage (HH)
Building Control: TBA

3. PROCUREMENT STRATEGY AND TENDER PROCESS

The project is being tendered on a '2 Stage Tender' basis in order to allow for the early appointment of a 'Preferred Contractor' to form part of the Project Team.

Due to the complexity of the site, and potential 'unknowns' within the remedial works of the existing Brunel Building, the tender process and contract will be designed to allow for an early start on site, where the exact extent of the work may not be fully known until the project is underway.

Full design, pricing and specification documents will not be available until work has commenced on demolition and remediation of the Brunel Building and wider site.

The 'Preferred Contractor' will work in conjunction with the project team to develop out costs and technical solutions complying with the Made CRtBO (which sets out the development to be completed and establishes the baseline position from which post Planning pre-development work and development work should be carried out), and the Listed Building Consent.

This process will lead to an 'open book' Second Stage tender, where all costs, details and specifications will form part of the final contract documentation for the main contract works.

Contractor's suitability through this process will not be singly based on cost but also their approach to understanding and engaging with the Atmos process and the outcomes required by the Totnes community. It is important the Contractor has an understanding and willingness to work alongside the project team to deliver the scheme within 'the Order'.

The 'First Stage' Tender process will be broken down as follows:

First Stage Tender Basis

Please use the following information to form the basis of your first stage tender:

- The site address: Brunel Pumping Station, Old Dairy Crest Site, Station Yard, Station Road, Totnes.
- Client and correspondence address: Totnes Community Development Society, Atmos Project, Station Yard, Station Road, Totnes, TQ9 5JR.
- Proposed 'high level' construction programme:
 - Proposed Start - September 2019

- Demolition, remedial works and enabling work
- Brunel Refurbishment (74 weeks duration) and Energy Centre Construction (30 weeks duration), to run concurrently
- Contractors to provide a contract programme proposal demonstrating how this will be achieved.

The baseline programme may be revised at Stage 2 and working with the preferred contractor the client and design team may look to accelerate and/or compress the programme.

Proposed form of contract

JCT Prime Cost Building Contract 2016 with amendments to be negotiated with the preferred contractor.

First Stage Tender Proposals

Please provide the following information as part of your tender:

- Company information and availability to undertake the project during the proposed construction period.
- C.V.'s of key personnell who would be forming part of the project team.
- Details of any subcontractors who will provide provision around:
 - Demolition
 - M&E
 - Heritage
 - Landscaping
- Full detailed method statement for the Asbestos Removal and Demolition works.
- Experience/knowledge of Community Led Projects, Ownership and Training as set out in this document.
- Statement on willingness to understand the 'process' and engage positively with the requirements of the community.
- Demonstrate knowledge of environmental design and construction principles and meet 'healthy building design' requirements. Healthy building design is understanding the implentation of natural, breathable building materials in historic building fabric. This would specifically involve the use of lime mortars and renders, natural woodfibre insulation systems that allow the building fabric to 'breathe'.
- Statement on working with local supply chains and sub contract teams to the project.

- Experience of working on Listed Buildings.
- Brief details of two clients willing to provide references.
- Full breakdown of costs set out as follows:

Element	Cost	Assumptions and Exclusions
Preliminaries and site set up		
Temporary enabling works		
Demolition works		
Drainage infrastructure		
Brunel Building refurbishment		
Sunroom glazing & louvre shading system		
Stairway, Mezzanine walkway & Lift 01		
Sliding folding screens between Brunel 2 & Brunel 3		
Retractable wall system to Brunel 4		
Catering Kitchen fit-out		
Specialist lighting/sound equipment to Brunel Building		
Energy Centre Construction		
Mechanical & Engineering Services package		
Allowance for furniture, fixtures and fittings		
Landscaping – civils and highways works		
Soft landscaping		
Overheads and Profits (OH&P)		
TOTAL		

Provisional Sums

There are elements of the project that require specialist consultation to develop them to a detailed design level for accurate costing at Stage 2 Tender. For this Stage 1 Tender, please provide provisional sums for the following items:

- Mechanical & Engineering Services package.
- Sunroom glazing & louvre shading system.
- Stairway, Mezzanine walkway & Lift 01.
- Sliding folding screens between Brunel 2 & Brunel 3.
- Retractable wall system to Brunel 4.
- Specialist lighting/sound equipment to Brunel Building

- Catering Kitchen fit-out
- Please note any cost assumptions or exclusions
- Outside of the risks already noted the key risks and opportunities that can be identified.
- Copy of your current Professional Indemnity Insurance.
- Please provide any relevant supporting information demonstrating your suitability in responding to the requirements within this document – to a maximum of 5 x A4 sides.
- Please ensure that the total submission is no more than 40 x A4 sides

Tender Queries

Direct any tender queries to Dave Chapman dave@triformis.co.uk and Andrew Kirby andrew.kirby@akirbyarchitects.com

We will forward a queries and responses sheet to all tenderers on a weekly basis during the first stage tender period.

Site Visits

Site visits will be arranged for 8 May 2019.

Tender Evaluation Criteria

The tender evaluation will consider the following criteria:

- Pricing and Commercial
- Understanding of the Project
- Proposed Methodology
- Relevant Experience of Project Team
- Approach to Community Engagement
- Other Criteria

Tender Returns

Please return five copies of your first stage tender to Dave Chapman, Atmos Hub, Atmos Project, Station Road, Station Yard, Totnes, TQ9 5JR and an electronic copy to dave@triformis.co.uk and andrew.kirby@akirbyarchitects.com by mid-day (12pm) on Wednesday 22nd May 2019. Please note that tenders received after this date will not be considered.

Following evaluation of the first stage tender returns, successful tenderers will be invited to interview with the client and architects to enter second stage tender negotiations.

4. TENDER DOCUMENTS

Architectural Drawings

- 1801 100 Brunel Existing Elevations
- 1801 101 Brunel Stripped Back Elevations
- 1801 102 Site Plan & Survey
- 1801 103 Phase One CDM Key Risks Plan
- 1801 402 Brunel Ground Floor Plan
- 1801 403 Brunel First Floor Plan
- 1801 404 Energy Centre Ground Floor Plan
- 1801 405 Energy Centre First Floor Plan
- 1801 406 Brunel Building Section AA
- 1801 407 Energy Centre Section AA
- 1801 408 Brunel Building Section BB
- 1801 409 Brunel Building Section CC
- 1801 410 Brunel Building Sunroom Details
- 1801 411 Brunel Building Typical Wall Details
- 1801 412 Brunel Building Proposed Elevations 1
- 1801 413 Brunel Building Proposed Elevations 2
- 1801 414 Brunel Window & Door Details
- 1801 415 Brunel Mezzanine & Stair Insertion
- 1801 416 Brunel Mezzanine & Stair Details
- 1801 418 Existing & Proposed Eaves Detail
- 1801 420 Sunroom Visualisation
- 1801 421 Brunel Performance Visualisation
- 1801 422 Brunel Restaurant/Main Space Visualisation 1
- 1801 423 Brunel Restaurant/Main Space Visualisation 2
- 1801 424 Schedule of Condition: Existing Rafters
- 1806 100 Phase One Landscape plan
- 1806 101 Phase One Landscape plan with Vehicle Tracking

Structural Drawings

- 9844. S100 Brunel Building Foundation Plan
- 9844. S110 Brunel Building Ground Floor Plan
- 9844. S120 Brunel Building First Floor Plan
- 9844. S160 Brunel Building Sections & Details
- 9844.S200 Energy Centre Foundation plan
- 9844. S210 Energy Centre Ground Floor Plan
- 9844. S220 Energy Centre First Floor Plan
- 9844. S260 Energy Centre Sections & Details

Enabling Works Drawings

- 15100 204 Temporary Drainage Layout- Phase 1 Pre-demolition
- 15100 205 Temporary Drainage Layout- Phase 2 Post demolition
- 15100 206 Permanent Drainage Layout
- 15100 207 Prohibited Areas for Demolition Arisings

Reports

- Demolition Atmos South & Strip back, D3
- Framework for Construction Management Plans

- Conservation Management Plan, HH
- Design & Access Statement, Brunel Building (For LBC), AKA
- Atmos Brunel – MEP Summary
- Mechanical, Electrical & Public Health Engineering Systems report. Please note this is Stage 3 information forming part of 'The Order' and is provided here for information only.
- Atmos Totnes Case Study
- Community Right to Build Order Baseline (full Community Right to Build Order <http://bit.ly/ATCRtBOM>)

CDM

- 1806 103 CDM Key Site Risks Drawing, AKA
- Project CDM Strategy Brief, AKA
- Hazard register for Phase One Works – Site specific risks, AKA
- Wider Atmos project Risk Register, MACE

5. COMMUNITY RIGHT TO BUILD ORDER

The CRTBO will be a new process to many tendering contractors and so some detail is provided to explain process. Please see the Atmos Totnes Case Study, the Made Community Right to Build Order and the baseline position from which all post Planning pre-development work and development work must take place.

6. COMMUNITY LABOUR INITIATIVE

A Community Labour Initiative (CLI) scheme will be incorporated into the construction process to assist in developing out the project.

The CLI is a form of labour programme which enables vocational training, specialist knowledge and capacity building for a range of local people and businesses. It is an integral part of Atmos Totnes and will therefore be applied to as many elements of the refurbishment of the Brunel Building as possible.

All Contractors involved in the delivery of Atmos Totnes will be required to participate fully in the CLI. Contractor's Construction Management Plans will be required to include associated targets, procedures and plans. Key outcomes for the CLI include:

- The employment and training of local labour from TQ post code areas.
- The agreement of packages of work to be undertaken by trainees, either independently or in conjunction with contractor's/sub-contractor staff.
- The number of formal and informal training outcomes derived through delivery of the contract.
- The use of local firms in each sub-contract

Tenderers need to demonstrate their ability and scope for delivery of the CLI as part of their response at Stage 1, setting out the opportunities and challenges. At Stage 2 the costing structure expected from Tenderers is to be based on a breakdown of plant, labour and materials with the training and local skills incorporated in the labour element.

7. SUSTAINABILITY OVERVIEW

'Exemplar' sustainable design of the site and buildings is central to the requirements of 'The Order'. This is to be achieved through all aspects of the site and building designs.

Although no formal BREEAM assessment is required, it is considered that the community consultation process to date alongside the overall sustainability objectives and project measures are broadly equivalent to a BREEAM 'Outstanding' rating. TCDS have determined the procurement strategy coming out of the CRtBO process aims to achieve an exemplar level of sustainable development with a target of 40% energy reduction on current Building Regulations.

In order to achieve a sustainable design solution, which is inherent to the design approach, means achieving high levels of energy efficiency and applying rigorous ecological design. This is from the point of general site planning, orientation and landscaping through to the design of the development zones and individual buildings and building fabric design at later stages. The following general principles should be considered in helping to achieve this:

- Passive solar design planning and orientation.
- Ecological and low embodied energy materials.
- Strategic daylight and natural ventilation design.
- Locally sourced materials.
- High levels of natural insulation to the walls, floors and roofs.
- Airtight detailing and construction.
- High performance glazing.

The aim is to significantly increase the thermal performance of the existing Brunel Building using insulation in the floor, walls, and roof whilst retaining the key heritage features. In addition to the refurbishment works, the brief is to provide high levels of energy efficiency to all new build aspects of the proposed work.

Thought has been given to the proposed materials used for the buildings to achieve an environmentally responsible selection considering minimal environmental impact in the production, implementation and lifecycle where practical.

Materials have been chosen to reflect the existing materials and aesthetic of the context where appropriate, such as natural slate, metal cladding, natural stone, render, timber cladding, to add to local distinctiveness, architectural merit and diversity.

Sourcing of local, natural materials will help ensure a low embodied energy solution can be achieved, while adding to local distinctiveness and vernacular. Using 'fabric first' building fabric design principles, the aim is to

achieve insulation levels which significantly reduce the energy demands of the buildings.

Buildings have been designed to ensure good levels of daylight and natural ventilation (where possible within the listed Brunel Building) for general health and wellbeing, and to limit the use of artificial lighting during daylight hours.

This tender includes the Energy Centre linked to the listed Brunel Building. Energy will be produced on site as far as possible using solar panels. The Energy Centre will provide heating to the whole site and is fully explained in the Services section of this document.

8. CONSTRUCTION MANAGEMENT PLAN

The appointed Contractor will be required to develop and implement a Construction Management Plan. This will cover how management processes, site set-up and operational ways of working will meet requirements.

The Framework for Construction Management Plans issued as part of this tender pack provides guidance to the Contractor in this regard. Particular attention should be given to requirements relating to environmental and social impacts, and health and safety performance.

9. CONSULTEES & STAKEHOLDERS

In order to achieve a smooth and compliant delivery of the project, ongoing consultee and stakeholder engagement will be required. Outline details are summarised below, and the appointed main contractor will be expected to support TCDS in engagement activities.

The Brunel Building currently has pigeons roosting inside so **Natural England** will need to be consulted as part of wildlife mitigation. The North end of the Energy Centre is within an 8m easement of the Leat and there is consent in place for the works.

Due to the proximity of the building to the railway and the platform to Totnes Station, **Network Rail** will need to be consulted during works.

There is asbestos in the Pump House associated with its previous industrial use so a **Health & Safety Executive** will be consulted.

Listed Building Consent is required for works to the Brunel Building which will be obtained through **South Hams District Council** with interest from **Historic England**. The officer assigned to the project is Richard Gage. A Listed Building Consent application for the proposed works was submitted on 12th April 2019.

10. THE EXISTING BRUNEL BUILDING

The Brunel Building is the grade 2 listed Totnes Pumping House that formed part of the Brunel designed Atmospheric Railway constructed in 1847. Please see the Conservation Management Plan included in this tender pack for more details concerning heritage background.

The Brunel Building consists of the Engine house to the South (the main volume to be split into Brunel 2, 3 & 4) and the adjoining Pump House to the North. Both buildings are in a protected disused condition.

The buildings were in use as part of the Atmospheric Railway for less than a year and by 1848 were redundant. Substantial material changes have been made to the original shell of the Brunel Building to make it fit for purpose for the industrial uses that followed: Symons Cyder Mill (1884) and milk processing (1934 – 2007).

The original buildings consist of thick stone walls (typical outer stone veneers with stone rubble inner build up) with large arched openings and a slate finished timber roof structure.

Initial investigative work took place in 2018 to assess the condition and location of original windows, eaves and building foundations. These initial investigations determined that much of the original details and features have been damaged, compromised or lost due to the building's previous industrial use. As a result, the project team places key heritage value on the South West Elevation and the internal timber roof structure. Please refer to the Pre-Investigative Works report and the Summary of Significance in the Conservation Management Plan for further detail.

There have been the following material changes to the Brunel Building Engine House between 1884 and 2007;

- Single leaf blockwork lines the inside of the original stone structure (approx. two thirds internal height) & are connected to the original structure with wall ties.
- A sloping concrete slab has been poured across the entire footprint internally with a drainage gully (see investigative works report for Core Drill findings).
- A substantial mezzanine structure is found internally covering approximately a third of the floor area to the North West of the plan.
- Engineering bricks cap the top of the existing stone walls at eaves level.
- Engineering bricks line some existing openings.
- Various blockwork/ brickwork/ concrete infill has been used to close off the original arched window openings to SW, NE and NW elevations.
- Concrete render covers two thirds up the original stone walls internally.
- Concrete render covers the majority of original stone walls externally including over original window openings. Please refer to existing elevations for more detail. The exception is the South West elevation of the building facing the railway, where original stonework is free from concrete render and is therefore of high heritage value to the project.

There have been the following material changes to the neighbouring Brunel Building Pump House between 1884 and 2007;

- Various non-original linings containing asbestos to the walls, floor & roof are found. More investigation & stripping back required under controlled and safe conditions to assess the existing fabric.

There has been no surviving intact original joinery found. There is a small section of broken timber window frame found within one of the blocked-up windows in the South West elevation, which is not believed to be original. However, once fully revealed, this will be evaluated to determine its age and whether it is original or not. If original, it will be used to develop the detailed designs for the joinery package throughout the building.

Due to the complexity of the existing condition/heritage value of the existing structures, a site visit is considered mandatory for Tenderers as part of this first stage tendering process. Site visits will be arranged by TCDS.

11. TEMPORARY ENABLING WORKS

The following enabling works are to be included in the contract;

A: Site access road

Provide site access road to the North of the South site. This road shall bridge the leat as shown on drawing 1806 103 [CDM Key Site Risks]. Contractor to provide relevant civil engineering for bridge.

B: Temporary surface water drainage provision

During construction, surface water cannot run directly into the Leat and needs to be collected and filtered. An initial temporary surface water pond is to be installed prior to any demolition on site. This shall remain until the buildings have been demolished and a site cleared for a second pond. This second pond is intended to remain in position for the entirety of the construction of the Atmos North site (anticipated lifespan of 7 years). The second temporary pond shall be landscaped to the advice and specification of Tor Ecology to provide habitat for invertebrates. The temporary surface water drainage strategy is set out by the following JGP drawings;

- 15100 204 Temporary Drainage Layout- Phase 1 Pre-demolition
- 15100 205 Temporary Drainage Layout- Phase 2 Post demolition
- 15100 206 Permanent Drainage Layout
- 15100 207 Prohibited Areas for Demolition Arisings

C: Sewer pump

Provide sewer pump for South site.

12. DEMOLITION WORKS

The Main Contractor will be the holder for the Demolition Works. Please refer to the appended Demolition Atmos South & Strip Back report by D3 Consulting for the Scope of Works, Site Information and Works Information for

all Demolition Works. This can be used by Tenderers to issue to their own Sub-Contractors.

The Main Contractor is at liberty to remove scope from the Demolition Contractor Scope of Work as included by the Employer in the Tender Documents, but will need to ensure that such scope removed from the Demolition Contractor is then included in the Main Contractor's scope.

The Employer expects that the Selected Demolition Contractor will have an active and operational presence in the South West.

Please see the appended Tender Evaluation Criteria for information.

D3 Consulting will be the CDM Consultants/Advisors to AKA for the Demolition Works.

13. CDM

D3 to provide CDM consultation for Demolition Works.

For CDM information please refer to:

- AKA drawing 1806 103 [CDM Key Site Risks]
- AKA Project CDM Strategy Brief
- AKA Hazard register for Phase One Works – Site specific risks
- Mace wider Atmos project Risk Register

14. BRUNEL BUILDING DESIGN REQUIREMENTS

The client aspires to create contemporary extensions to the existing Brunel Building and increase the thermal performance of the existing fabric using high performance construction criteria and natural, breathable materials where possible.

In order to achieve high thermal performance, wall and roof thicknesses need to be thicker than in that of conventional buildings in order to allow for the levels of insulation required to meet the targets.

Design:

The project will make the existing Brunel Building an impressive, flexible-use, events space for community use and ownership which is both ecologically sensitive and energy efficient.

The design philosophy of the client is for an environmentally sensitive and site responsive solution that enhances the heritage value of the building. The design process has been careful to achieve a meaningful and modern solution whilst respecting the heritage status of the building. Please refer to the LBC Design and Access Statement by AKA.

Existing original features are to be retained and restored where appropriate. Contemporary interventions have a contrasting aesthetic to the original building fabric. Where possible, new insertions will not physically connect to

the Listed Building fabric and where physical connections back to the original building are required, an honest and light touch approach is taken. The design seeks to be honest about the industrial history of the building so all plant, pipework and services shall be exposed.

The proposed layout of the building has been developed carefully alongside a building management plan with the client to allow for maximum and flexible community use at any one time: the entire building could be used as one large conference venue or each space could function separately at the same time. As a result, acoustic separation will be an important construction consideration and a strategic acoustic approach will need to be developed as part of detailed design the preferred Main Contractor.

Materials & finishes:

- Tenderers will provide the following for all materials that are not specified:
 - Percentage to be sourced locally
 - Percentage of timber products to be FSC Certified (or similar) with a chain of custody certificate
 - Percentage of reclaimed and/or recycled content
 - Criteria for minimising the impact of the building e.g., by reference to Home Quality Mark or BRE Green Guide

- Breathable construction is essential for both the external walls and roof build up in terms of the preservation of existing building fabric and general requirement in the for the use natural building materials set out in the Made Community Right to Build Order. This allows the safe transfer of vapour through the building fabric based on achieving a 5 to 1 ratio, where the vapour resistance on the internal insulated fabric lining up is 5 times that of external fabric lining.

- Externally to existing walls, existing concrete render is to be removed and replaced with lime render for breathability. Internally to existing walls, existing concrete render is to be exposed and inspected/ tested in order to fully understand the impact of non-vapour permeable materials. On inspection of the face of the stonework lime render specifications will be set out to ensure breathability is achieved through the walls.
 - The following lining materials considered acceptable in this build up:
 - OSB internal sheathing board.
 - Vapour check and internal airtightness membranes.
 - Woodfibre insulation boards.
 - Lime render.

 - The following insulations (listed in priority order) are considered acceptable in this build up:

- Woodfibre systems (Steico, Pavatex or similar approved)
 - Sheeps' wool.
 - Cellulose Fibre / Warmcell (recycled newspaper)
 - Glasswool (superglass or similar with 80% recycled glass content).
 - Mineral wool.
- PIR (Closed Cell systems such as celotex, kingspan etc) insulations are not considered appropriate in any of the wall and roof build ups.
- The following finishing materials are to be incorporated into the design, which are either vapour permeable or designed with ventilation zones (min 50mm) where required.
 - Timber frame slim line double glazed windows (subject to LBC consultation).
 - Polyester powder coated aluminium clad composite timber frame external doors.
 - Slate roof finish.
 - Single ply membrane or zinc to any flat roof areas.
 - Polyester powder coated aluminium rainwater goods.
 - Lime render.
 - Translucent insulated glass blocks to eaves detail.
 - Flush patent glazed rooflights to be integrated into roof build up.
 - Aluminium ventilation louvers to doors/windows/eaves detail.
- Externally, all existing stonework, openings and heritage features are to be retained, preserved and restored where appropriate. All red Breccia stone sills, window surrounds and dentil pad stones are to be preserved and restored by specialists where possible. Please note: Red Breccia 'stone' is not actually a stone but a composite mix to create a moulded profile (possibly made from red stone/ aggregate mix - site visit needed for further inspection), and samples shall be supplied for comment and approval to the client in a timely manner.
- Externally, all existing timber purlins, rafter feet and dentil details at eaves level to be preserved and restored.
- Internally, existing timber roof structure is to be preserved and restored to SE and timber conservation specialist's specification.
- For all new internal partition walls allow 145mm thick Metsec acoustically insulated partition walls.
- Bespoke metal staircase with inlaid timber treads, enclosed metal balustrade and metal mezzanine walkway supported by freestanding steel structure to be developed out as specialist contractor's design item. Please see drawings 415 and 416 for more detail.

- High spec public building finish to Lift 01. Lift 02 has a utilitarian finish.

BRUNEL 1 'SUNROOM'

Please see drawing 402, 403, 406 for details.

Use & requirements

- Main public entrance to Brunel Building from public realm.
- Free standing Café/bar/box office counter under staircase. Café/bar to serve hot/cold drinks and snacks.
- Space will be filled with seating that spills out onto public square.
- Exhibition wall for heritage interpretation.

Materials

- High spec public building level finishes throughout.
- Insulated floor.
- Engineered timber frame with steel fixings to SE specification.
- Structural glass walls and roof.
- Solar shading system with bespoke timber solar shading panels. Various shading options for user control - location of panel types to be determined with solar modeling. Please see drawings 410 (sunroom details) and 413 (proposed elevations)

Services

- Unheated.
- High level natural ventilation based on thermostatic actuators for passive temperature control. Services strategy for natural ventilation to be further developed with M&E Engineers and preferred Contractor prior to Stage 2 Tender. High- & Low-level vents opening 300mm in glazing needed.

BRUNEL 2

Use & requirements

- Main double height public events space fit for large performances/ music gigs/ conferences.
- Uninterrupted view of internal timber roof structure of high importance.
- Timber roof structure to be preserved and restored to specialist specification.
- Original window openings to be revealed and reinstated along SW, NW and NE elevations. New timber framed, glazed windows & doors to be installed (Please see drawing 414 for details).
- Existing slab to be removed and replaced with new damp proof, insulated floor build up.
- Existing blockwork walls and other industrial interventions to be removed.
- Existing mezzanine to be removed.

Materials

- New insulated internal linings to original walls with render finish.
- New insulated roof build up above existing timber roof structure. Existing engineering bricks and concrete plinth removed from top of existing

wall, original timber rafter feet raised, glass block/louver infill detail at eaves.

- Polished screed floor finish
- New rooflights in existing roof over.

Services

- Underfloor heating with large event set back control.
- Naturally vented with louvres at ground level arched openings and high-level round window to NW elevation.
- Specialist lighting/sound equipment required attached to gangway on pully system operational at roof level.

BRUNEL 3

Use & requirements

- Public restaurant serviced by kitchen.
- This is the only space in the building not adequately naturally lit. Artificial lighting shall be required to specialists design.

Materials

- High spec finishes.
- Polished screed floor finish.
- Freestanding concrete columns to mezzanine pod to SE specification. Diameter 200mm – polished / smooth finish / casting effect.
- Sliding folding screens for flexible use between BRUNEL 2 and 3.

Services

- UFH, ventilation, lighting.

BRUNEL CIRCULATION CORRIDOR

Use & requirements

- Access for public into services and Energy centre.

Materials

- Utilitarian public building finishes.

Services

- Flat panel radiators.
- Pipe & containment overhead.

GREEN ROOM/ EVENTS SUPPORT/ COMMUNAL DRESSING ROOM

Use & requirements

- Private spaces for performers/artists/events support.

Materials

- Utilitarian finish with high spec/specialist fittings in dressing room.

Services

- Flat panel radiators
- Intake louvres to top of North East window
- MVHR (supply)

KITCHEN

Use & requirements

- To serve restaurant and catered events on first floor BRUNEL 5/6.

Materials

- Utilitarian finishes/ specialist kitchen fit out.

Services

- Supply & Extract AHU in CV
- MVHR (Extract)

WCs

Use & requirements

- Unisex public & staff use. 4/2.6 litre dual flush water saving WC's, with leak free syphon flush (or similar approved).

Materials

- Existing mezzanine to be removed.

Services

- Flat panel radiators.
- Artificial lighting.
- MVHR (Extract).

BRUNEL 4

Use & requirements

- Community mezzanine space for flexible use (workshops, workspace, conference space).
- Existing large arched opening to NW elevation reinstated for natural light.
- Retractable tiered seating.
- Specialist retractable wall system to allow flexibility to mezzanine.
- New rooflights in existing roof over.

Materials

- Utilitarian finish throughout.

Services

- Naturally vented with louvres at ground level arched openings and high-level round window to NW elevation.
- Flat panel radiators.

BRUNEL 5 & 6

Use & requirements

- Community space for flexible use (workshops, workspace, conference space).
- Rooflights for natural light. Existing round window reinstated for natural light to BRUNEL 6.
- Platform lift from restaurant to allow catered events.

Materials

- Utilitarian finish throughout.

Services

- S & E MVHR (supply).

BRUNEL 7

Use & requirements

- Building facilities manager and staff office.
- The building maintenance and environmental controls to be located here.
- Internal window overlooking BRUNEL 4.

Materials

- Utilitarian finish throughout.

Services

- Flat panel radiators
- MVHR (supply).

BRUNEL 8

Use & requirements

- General Hire Space.
- Internal window overlooking BRUNEL 2.

Materials

- Utilitarian finish throughout.

Services

- Flat panel radiators
- MVHR (supply)

U VALUES FOR BRUNEL BUILDING:

The external wall, floor and roof build-ups need to meet the following target U values as a minimum whilst retaining key heritage features:

Existing Brunel Refurbishment

- Wall: 0.28 W/msq deg C
- Roof: 0.18 W/msq deg C
- Floor: 0.22 W/msq deg C
- Windows: 0.8 to 1.0 W/msq deg C (high performance, low profile double glazing)

New build extensions

- Wall: 0.12 W/msq deg C
- Roof: 0.10 W/msq deg C

- Floor: 0.12 W/msq deg C
- Windows: 0.6 to 0.8 W/msq deg C (Triple Glazed)

Given the above criteria, the contractor may propose a system preferable to them based on expertise, specialist systems and experience. Alternative options would be welcomed by the client team for consideration should they meet the overall project criteria and offer better value to the project.

15. ENERGY CENTRE DESIGN REQUIREMENTS

The client aspires to create a contemporary building with a high level of thermal performance using high performance construction criteria. The Energy Centre is to become an innovative exemplar energy project and visitor experience.

In order to achieve high thermal performance, wall and roof thicknesses need to be thicker than in that of conventional buildings in order to allow for the levels of insulation required to meet the targets.

Design:

A simple box-like glazed link connects the Brunel Building to the Energy Centre. In design terms, this creates a visual break between the two buildings and is a delicate, light touch connection to the Listed Building.

The main Energy Centre building is a simple, repeated proportion along its length to allow for future proofing and ease of construction. It is designed to a volume and size that allows future planning for other uses as well as an Energy Centre. It is a timber clad, super insulated shell based structure of engineered timber frame design (Glulam or similar).

At its ground floor, the Energy Centre houses the plant room for the Brunel Building and various plant to M&E specification to provide energy to the Atmos site. A connecting walkway structure links office workspace pods at first floor with ENERGY CENTRE 2.

High performance triple glazed windows to all new areas.

The Energy Centre building requires deep foundations (to SE specification) due to its proximity to the railway.

The visitor's mezzanine area (ENERGY CENTRE 2) will be finished to a higher public building spec. Internal finishes elsewhere will be utilitarian, contemporary meets industrial. All pipework and services shall be exposed throughout.

Flues from Energy Centre rise into a chimney externally as part of the public realm. This chimney is a modern interpretation of the existing brick chimney found on the site now and will become a new landmark for the Atmos project. Tapered steel frame housing with steel louvers around 4 flues to M&E Engineer Specification.

Materials & finishes:

- Materials to be used in construction will be selected to minimise the environmental impact of the building in their production and during its entire lifecycle. Preferred contractors will provide the following for all materials that are not specified:
 - Percentage to be sourced locally
 - Percentage of timber products to be FSC Certified (or similar) with a chain of custody certificate.
 - Percentage of reclaimed and/or recycled content
 - Criteria for minimising the impact of the building e.g., by reference to Home Quality Mark or Green Guide

- Breathable construction is required in considering the external walls and roof build up. This allows the safe transfer of vapour through the building fabric based on achieving a 5 to 1 ratio, where the vapour resistance on the internal insulated fabric lining up is 5 times that of external fabric lining.
 - The following lining materials considered acceptable in this build up:
 - OSB internal sheathing board.
 - Vapour check and internal airtightness membranes.
 - Timber vent 'breathable' external sheathing boards.
 - Woodfibre external insulation boards.
 - Weather/breather membranes fitted externally

 - The following insulations (in order of priority) are considered acceptable in this build up:
 - Woodfibre systems (Steico, Pavatex or similar approved)
 - Sheeps' wool.
 - Cellulose Fibre / Warmcell (recycled newspaper)
 - Glasswool (superglass or similar with 80% recycled glass content).
 - Mineral wool.

 - PIR (Closed Cell systems such as celotex, kingspan etc) insulations are not considered appropriate in any of the wall and roof build ups.

- The following finishing materials / rain screen cladding are to be incorporated into the design, which are either vapour permeable or designed with ventilation zones (min 50mm) behind the cladding where required.
 - Polyester powder coated aluminium clad composite timber frame windows and external doors.

- Aluminium ventilation louvres.
 - Zinc and solar panels to main roof areas.
 - Single ply membrane to flat roof areas.
 - Polyester powder coated aluminium rainwater goods.
 - Unfinished durable natural timber cladding (larch, cedar, oak or similar approved).
 - Galvanised steel and cedar solar shading structure.
- For stage 1 pricing purposes, we envisage the following typical build up of min. 300mm Timber I beam cassettes full filled with blown Warmcell (recycled newspaper) with low maintenance, inexpensive, robust internal finishes throughout.

GLAZED LINK

Use & requirements

- Circulation, stair and lift.
- Public entrance to Energy Centre including visitors to public viewing space.
- Simple, stripped back aesthetic with industrial feel and exposed pipework.

Materials

- Structural glass system.
- High spec public building finish throughout.
- High spec public building finish to Lift 03 and stair.

Services

- Not a heated space.

ENERGY CENTRE 1

Use & requirements

- Flexible use (workshop, workspace, conference space)

Materials

- Structural glass system.
- Utilitarian finish throughout.

Services

- Pipework and containment running overhead.
- Flat panel radiators, lighting and ventilation

PLANT SPACE

Use & requirements

- Double height space housing plant room, plant equipment.
- Double access doors to vehicular route to the North and railway side.
- Flue chimney replaces existing brick chimney on the site.

Materials

- Utilitarian finish throughout.

ENERGY CENTRE 2

Use & requirements

- Public entrance to Energy Centre including visitors to public viewing space.
- Flexible use (workshop, workspace, conference space)

Materials

- High spec public building finish throughout.
- Fire rated glazed screen to allow views over Energy Centre floor

Services

- Flat panel radiators, lighting and ventilation

ENERGY CENTRE 3,4,5 & 6

Use & requirements

- Office/Studio/Workspaces with some internal windows
- Acoustically and thermally separate from the main double height plant space of the building.

Materials

- Pre-fabricated timber frame system attached back to external walls to access natural light from the windows.
- Suspended metal walkway over plant with alternative means of escape as shown in drawing 405. Detailed consultation with a Fire Engineer is required prior to Stage 2 Tender.

Services

- Flat panel radiators, lighting and ventilation

U VALUES FOR ENERGY CENTRE:

- The external wall, floor and roof build ups need meet at least the following target U values:
 - Wall: 0.12 W/msq deg C
 - Roof: 0.10 W/msq deg C
 - Floor: 0.12 W/msq deg C
 - Windows: 0.6 to 0.8 W/msq deg C (Triple Glazed)
- Given the above criteria, the contractor may propose a system preferable to them based on expertise, specialist systems and experience. Alternative options would be welcomed by the client team for consideration should they meet the overall project criteria and offer better value to the project.

16. PUBLIC REALM & LANDSCAPING DESIGN REQUIREMENTS

The landscape masterplan has been designed in close collaboration with Tor Ecology to maximise the reintroduction of ecology and biodiversity across the site. Key features include:

- High diversity planting

- Sustainable urban drainage system
- Rainwater harvesting

This tender includes the public realm within the curtilage of the listed Brunel Building as indicated by the red line on the Phase One Landscape Plan (drawing 1806 100).

Design principles:

PLACEMAKING

- Form a new gateway to Totnes from the train station.
- Prioritise the life between buildings providing comfort, access, use & sociability.
- Inspire an active participation in public realm.

ACCESS & WAY FINDING

- Inclusive strategy for all levels of ability.
- Clear, safe separation between cyclists, pedestrians and cars.
- Adopt a primary wayfinding strategy using material changes and subtle level changes.
- Adopt a secondary wayfinding strategy using simple, clear signage as required.

SHELTER, ENCLOSURE & SAFETY

- Encourage safe 'chance encounters'.
- Provide a range of spaces to be alone, gather and perform spectacle.
- Provide varied extents of enclosure, shade and shelter.

TEXTURES & MATERIALS

- Local vernacular with homage to industrial past. Contemporary.
- Texture as wayfinding tool.
- Texture as inclusive access (the use of tactile paving).
- Materials to signify access for vehicles, cycles and pedestrians.

STREET FURNITURE

- Plenty of places to sit with a variety of furniture accommodating individuals and groups including homeless people.
- Human scale design.
- Bin provision.
- Cycle storage provision.
- Atmos bench: A local design competition will be held for the design of the Atmos bench. Please allow provisional sums for this item.
- Bug bench: A bench incorporating invertebrate homes for biodiversity. Timber solid base bench with insect wall to the rear.

ECOLOGY

- Fully ecology integrated approach.
- Clear definition to borders of wildlife habitats.
- Bat boxes, bee bricks etc. integrated into the architecture.

PLANTING

- Swales extending wetland aesthetic.
- Patchwork planting concept to define public realm zones.
- High diversity, edible and medicinal trees and herbs throughout.
- Sensory planting.
- Colour throughout each season.
- Planting management plan with some level of community ownership/ engagement.
- Supporting infrastructure (water, storage).
- Consult PFAF/ Agroforestry Trust to specify sustainable, low maintenance, perennial growing systems (Urban forest garden).
- Planting be carried out by the community.
- Planting as buffers, edges.
- Vertical landscaping opportunities (wires, walls, roofs).

PLAY

- Furniture that provides 'play as you go' opportunities.
- An inclusive, continuous play landscape (not a fenced off playground).
- Natural play opportunities (Water play, Quiet play, Social play, Physical play, Imaginative play).
- Safe play areas and supervised play at swales, leat, water's edge.

ART

- Collaborations with local people & artists to create sculptural pieces / street furniture/ murals.
- Tell the story of the site.
- Designated sites for community art projects.

LIGHTING

- Wildlife and site sensitive approach
- Strips on ground rather than street lighting (Tor Ecology consultation)
- Subtle, minimal to residential areas
- Feature lighting to civic areas

HARD SURFACING

Please refer to the key on drawing 1806 100 for information:

- Paving type one: Pedestrian pathway/ pedestrian area. This type is sometimes spaced with a mixture of grasses and wildflowers sown between.
- Paving type two: Drivable surface.
- Paving type three: Drivable surface (type two laid in a pattern).
- Paving type four: Car free zone.
- Paving type five: Car free zone.
- Paving type six: Car free zone for private workshop/ office space.

PROTECTED WILDLIFE ZONES

- Zones as highlighted on drawing 1806 100.

SUDs STRATEGY

- High diversity sustainable drainage system.

- Landscape feature channels intercept and direct surface water flow as part of SUDs strategy back to the leat.
- Flat bottomed, planted with grass, wetland plants and trees.

17. SERVICES

Design and installation by M&E Contractor to M&E Engineer's criteria at Stage 2 Tender. The level of M&E information as part of this tender pack has been developed to equivalent RIBA stage 3 for Listed Building Consent and requires further design and co-ordination for accurate costing. Therefore, please provide a provisional sum for M&E package for this Stage 1 Tender.

18. OCCUPANCY AND POST OCCUPANCY

The preferred contractor will be required to provide a full and detailed handover of both the Brunel Building and the Energy Centre alongside infrastructure remaining on site. The handover process will include training on key systems, which shall be undertaken prior to completion of the works so as to ensure that TCDS can take up immediate effective occupancy of the buildings and the management of the site.

Post Occupancy Evaluation will be undertaken after 12 months of occupancy. The preferred contractor is expected to play a full role in this evaluation.