

## Ipsen Bioinnovation

*Design and Construction of a New Fit-out Facility.  
Extending our Design Integration Expertise in AutoCAD, Revit and BIM.*

The Austin Company secured the laboratory and office fit out for the global pharmaceutical group Ipsen, at Milton Park, Oxfordshire following a competitive selection process. Our appointment commenced with the detailed design for the new Ipsen Bioinnovation site following a review of the preliminary design in conjunction with Ipsen to test that it met its current requirements. This included a large open plan laboratory space (locally termed the 'Superlab') on the first floor, designed to foster collaboration between PI's with a number of features such as glazed 'write on walls'.

As part of the design review, people/material flows and general arrangement of the laboratories were challenged and optimised to suit the needs of the scientists. A key challenge came from the change of use from a new shell & core office building to highly serviced laboratories and the issue of raised floors further reducing the available storey height. This restricted the ceiling void and therefore the space available for distributing the extensive building services within each floorplate. A ceiling height of 2.7m was achieved within a service void of only of 0.8m.

The servicing of the building required the plant room capacity be significantly increased to accommodate extract fans and ductwork. The roof was strengthened locally to the core of the building with external steel plant decking necessary to locate the chiller and air handling plant. New external risers provide additional capacity for the vertical distribution of ductwork, pipework and electrical services. The THC2/3 laboratories are located on the top floor as these require larger ventilation rates and with the greater intensity of ductwork, forming additional holes through the roof was easier.

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Three air handling systems provide a dedicated system to each laboratory suite and supplemented with dedicated extract to suit the various microbiological safety cabinets and fume cupboards throughout the laboratories.

The complex nature of the building services further extended our design integration expertise in AutoCAD, Revit and BIM level II deliverables. The M&E sub-contractors were issued with the Revit model to develop their working drawings. While the architectural model was maintained by the Austin Company, our contractors took ownership respectively of the mechanical and electrical federated model. The use of the Revit model and clash detection parameters have proved invaluable aspects of the modelling process involving minimal rework during the design and installation stages.

The Revit model has been kept up-to-date during the construction process resulting in the provision of as-installed drawings being significantly improved by both their accuracy and timing of inclusion into the O&M manuals.



*"The Austin team have delivered a superb new laboratory and office space in which Ipsen's UK R&D team are now located. From the design process and through the construction phase, Austin have listened to the needs of the Ipsen team and understood the vision for the new site. The laboratory requirements were challenging, and yet the construction phase has been completed within 8 months, on time to accept the personnel transferring from other Ipsen UK sites." - John Chaddock, VP Neurology, Site Head, Ipsen Bioinnovation.*

# Welsh Government

*State of the Art Advanced Therapy Medicinal Product Facility.  
Innovative Stem Cell Therapies.*

The Phase 1 fit-out mentioned in the previous Austin update which includes offices and laboratory areas is now complete and operational.

Austin worked closely with the tenant to establish its accommodation requirements which include dedicated IT communications room, separate archive, a kitchen and dining/town meetings area and a newly refurbished double storey reception / entrance area all of which are now in use.

The office area is served by a VRV system providing an energy efficient solution while allowing it to operate independently from the main laboratory and production areas.

Austin modified the external plant areas to include substantial new service gantries to accommodate the extensive plant and services distribution required to serve the

ATMP cleanrooms. An access and maintenance strategy was developed to establish how these elements could best be accommodated in an existing building not intended to house a pharmaceutical manufacturing facility.

The next phase of the works will include installation, commissioning and validation

(SAT & IQ/OQ activities) of the production areas for clinical scale and subsequently full commercial scale manufacturing.

The facility will be occupied for leading clinical stage, stem cell business focussed on the development of innovative stem cell therapies.



# MRC Technology and Stevenage Bioscience Catalyst

*From Medical Research to Patient Treatments.  
Bespoke Biology, Biotherapeutics and Chemistry Laboratories.*

Having provided a full multidisciplinary design for the laboratories and offices fit-out works for MRC Technology and Stevenage Bioscience Catalyst in the Accelerator Building on the GSK research campus in Stevenage, Austin continued its involvement by providing preconstruction design services followed by engineering support during construction.

The new facility provides purpose designed research accommodation for MRC Technology, a medical research charity focused on improving outcomes for patients. The new facility includes bespoke biology, biotherapeutics and chemistry laboratories incorporating specialist radiological, tissue culture and NMR capability.

Austin successfully used building information modelling (BIM) in supporting the collaboration between the various internal design disciplines which resulted in a well-integrated building services design that in turn led to fewer technical queries than those typically expected between the construction team and the design office. In Austin's experience, this has been especially true for queries which ordinarily arise from services coordination issues on site.



*"We are delighted with our new facility. Austin's state of the art design has created a dynamic open plan environment which increases interdisciplinary interactions and allows us to better harness the problem solving abilities of our employees. The new laboratories and offices enable teams to work more efficiently to push forward potential treatments to patients." - Dr Justin Bryans, Director, Drug Discovery at MRC Technology.*

***The new laboratories and offices enable teams to work more efficiently to push forward potential treatments to patients.***

The facility included additional mechanical and process plant, the relocation of an existing standby generator, a new UPS and extension of existing building services to accommodate the new research facility comprising laboratories, offices and recreational spaces.

Our multidisciplinary design team consisting of architects, mechanical, electrical and structural engineers not only supported the construction process but also acted as part of the client's peer review team.



# Porton Biopharma

*Design and Construction of New Biopharmaceutical Facility.*

*Improving Methods used in the Pharmaceutical Manufacture of Life Saving Products.*

The Austin Company have been appointed by Porton Biopharma Ltd to undertake the detailed design and construction of a new, state of the art Biopharmaceutical facility.

In a "ground breaking ceremony" on 17th June 2016 led by Baroness Scott of Bybrook OBE, Porton Biopharma Ltd (PBL) began the construction of the pharmaceutical development which will provide state-of-the-art facilities for its teams of scientists.

The circa 530m<sup>2</sup> single story building has been designed to reflect current best practise in laboratory design and will replace older facilities. The new facility will feature a fermentation suite with a range of bench-scale reactors and a down-stream processing suite for activities such as filtration and chromatography.

The building will accommodate a team of scientists and technicians dedicated to improving the methods used in the

pharmaceutical manufacture of life saving products.

As well as improving processes and yields for PBL products, the facilities will also be used to undertake developmental contract work for PBL customers who wish to translate their research into clinical outcomes.



Commenting on the start of the construction phase, Dr Trevor Marks Director of Development said "my team are really looking forward to the completion of this new state-of-the-art facility later in the year and all the new equipment that they will have available to help deliver increased benefits for customers and their future patients".

The Austin multi-disciplinary in-house design team have completed the design and are now supporting Austin's construction team as the build progresses. The construction phase will last for seven months and is due to be handed over to PBL mid-December.

*"We are delighted to be able to support Porton Biopharma with the important work that they do and the opportunities that this brings to Wiltshire. I look forward to returning to see the new labs when they are up and running."*  
*Baroness Scott of Bybrook*

*"We are delighted to be working with Porton Biopharma Ltd on this prestigious project and look forward to handing over this cutting edge facility"*  
*Prakash Davda of the Austin Company*

## Medical Research Council

*Out in Africa | The Gambia.*

Having won a number of projects for the MRC at its various research sites in The Gambia, we were delighted to win the multidisciplinary design services for Keneba accommodation project. The OJEU procurement process was run on behalf of the MRC by UKSBS – UK Shared Business Services, Swindon. Our team was well placed as it had produced the original concept design study for the two storey, 12 room unit to accommodate visiting researchers and workers to the campus. The design will be developed to RIBA stage

3 and 4 with stage 5 site support activities also within our scope. With our work on a number of projects in The Gambia our team has developed a good appreciation of how to design for the particular climatic condition. Having a watching brief with regards to the construction by Gambian contractors of a few projects, we also appreciate the particular characteristics of the local supply chain – and what is and is not available. The local procurement, installation and maintenance of the component parts of the design is a key consideration of the Austin design approach.

## *Eight Consecutive Gold Awards*

Austin is proud to announce that for the eighth consecutive year it has been awarded the coveted RoSPA Gold Medal Award 2016 for its achievements in health and safety.



2016 marks the 60th anniversary of the RoSPA Health and Safety Awards. Since its establishment the scheme has been recognising and celebrating excellence in safety performance. The internationally recognised awards have become a sought after accolade for organisations by offering them the opportunity to prove their ongoing commitment to raise standards and celebrate success.

We thank our supply chain and our own staff for their continued support to our commitment to safety.

## *Design Best Practice Award*

Austin has received the top honour at the Annual Design Best Practice Case Study Awards from AstraZeneca, where its simple cleanroom edge protection detail was the clear winner among the sixteen strong member organisations eligible to vote.

The design solution was cited as having reduced the risk of falling, eliminates the need for temporary edge protection, has a minimal impact on installation time and is an aesthetically pleasing detail.

The Design Best Practice website, [www.dbp.org.uk](http://www.dbp.org.uk), is a valuable source of case studies illustrating good design solutions that assist with safe construction techniques.

## Merck Sharp & Dohme

Austin continue to provide services for site development, upgrade and new facilities to satisfy their user requirements. These services include design, engineering and project management services in the UK and abroad.

# Bio Products Laboratory

*Logistical Excellence within Tight Constraints.*

*Only 12 days shutdown on a Live Manufacturing Facility.*

Following a review of business risks, Bio Products Laboratory (BPL) at Elstree decided to improve the resilience of their aseptic filling lines' operations by installing an independent HVAC system to serve their new filling line for injectable products. The key driver for this was to ensure that a planned or unplanned shut down of the existing HVAC systems would not affect all the lines.

With no available space on the existing service floor, the new air handling unit and chiller were designed to be located at roof level on a specially constructed steel frame. The works also included duct work, controls and utility modifications associated with segregating the new fill line area from the existing AHUs and services.

The major challenges on this project were firstly, the 10 weeks period within which to design, procure, manufacture and install the new AHU including the new steel support platform and secondly the shutdown period that was limited to only 12 construction days inclusive of weekends.

From a logistics viewpoint, Austin ensured that the numerous roof penetrations for the new steelwork installation, on a live manufacturing

facility, were planned such that weather conditions would not impact on the main works or the critical paths on the programme.

Due to the tight timescales, the new platform and the AHU needed to be designed simultaneously; this was achieved and coordinated by Austin's multidisciplinary team through detail design, planning and construction management which included appropriate risk sharing and partnership with a proven supply chain.

The AHU, associated controls, chiller, structural requirements, surge protection system and UPS power supplies were successfully commissioned and handed over within the limited timescales to BPL's satisfaction by The Austin in-house multidiscipline design & construction team and the fill line area it serves was validated on the first pass and is currently in operation.

*"We thank The Austin Team who met BPL's expectations on this important and critical project". - Bill Lewis, BPL*



# Sanofi (Genzyme)

*Electrical Systems Upgrade on Business Critical Systems.*

*Minimal Disruptions with Minimal Implications.*

We're delighted to be continuing our relationship with Sanofi UK.

On this occasion, Austin has been appointed to undertake a feasibility study followed by the detailed design for the upgrade of an existing low voltage electrical network. The project involves the replacement of high and low voltage distribution networks serving the south part of the site.

The key drivers of the project are to minimise the risk of unwanted power outages that could arise due to the age and obsolescence of the existing infrastructure, and the limited scope for expansion/modification works on the network that is imposed by spatial constraints.

The proposed upgrade of the existing network, which is a business critical system, will provide an opportunity to rationalise the

existing electrical distribution to improve load balancing on the network. The project also included the potential of expanding the high voltage network for future developments on the site.

This required working closely with the Sanofi team to identify and agree on an implementation strategy and programme for this operationally critical project which Austin has been entrusted with.

Key considerations included sequencing and timing of the works to minimise disruptions to power supplies in order to avoid the potential operational implications to people, plant and production.

The assignment included Architectural and Structural services to design the new HV/LV Switch rooms and including support with any planning requirements.

# Royal Holloway

*University of London.*

*Electron Beam Lithography System.*

Austin has been appointed to provide technical support and to develop a feasibility study for a new Physics cleanroom at the Royal Holloway University of London, Egham. The cleanroom facility is required to house a specialist item of equipment - an electron beam lithography system with strict environmental and operational requirements. The extent of the cleanrooms will also allow for key equipment to be relocated from the existing Physics department building into five cleanrooms. Though the commission involves very technical considerations at a micro level, the starting point for our work has been to identify the optimum site for the new facility.

# Procter & Gamble

*Providing Design Expertise for On-Site Support.*

Having been responsible for the design and ER's (Employers Requirements) up to Stage 3 for P&G's new reception building at its manufacturing plant in Thurrock, P&G retained Austin to provide peer review support services during the construction stage. The client recognised the merit of retaining and accessing Austin's detailed knowledge of the project during this important phase of the project.

The new reception building facility is a high profile project for P&G, providing a conspicuous new gateway and a single point for personnel access to the whole manufacturing site. Austin's role includes assisting P&G with technical queries and reviewing all aspects of the architectural, mechanical, electrical and landscape design to ensure the employer's requirements and proposed standards are met.

*Procter & Gamble are very satisfied with the design services provided by Austin for their new Reception Building at London Plant. - Procter & Gamble.*

## Contract Manufacturing

*Fitting Clean Room into a Listed Building.*

Austin have recently completed a new installation for a contract manufacturing organisation who formulate and produce a number of Healthcare, cosmetic and skin care products for both internal clients and external third parties.

As part of a manufacturing upgrade and future proofing exercise The Austin Company were employed to design and construct a Cleanroom facility to house a new multipurpose manufacturing plant. The cleanroom was to be located within an existing manufacturing area within a Grade 1 listed building.

A review and validation of the exiting concept was undertaken, prior to commencement of the detailed design of the facility. It was decided at an early stage in the design to site the Air Handling Unit directly over the Material and personnel airlocks and create a technical space to house the process equipment support skids, thereby

minimising the overall facility footprint. A cleanroom panelling system which supported a walk on ceiling was chosen to allow for easy access to roof mounted services for inspection and maintenance purposes.

As the cleanroom is located within an existing production area, the construction area had to be isolated from production, to prevent any contamination from the building works. A temporary surround was erected, to prevent escape of any dust or contaminants from the building activities, with the air from inside the surround extracted to an external wall. The construction of the temporary surround and room had to be carefully planned and co-ordinated to avoid any disruption to production. A number of tie-ins to existing utilities and validated systems were also required and these had to be carefully planned and co-ordinated. This was completed during a planned factory-wide shutdown period.

## CDM

*Greater Understanding of Safety and Mitigation of Risk.*

With the creation of the Principal Designers role under the CDM 2015 regulations Austin's multidiscipline way of working has proved a natural fit with the duties and requirements of CDM 2015. The benefit of having a multi-disciplinary design and construction

team under one roof certainly helps to promote greater understanding of safety and the mitigation of risk across Austin's range of activities whether developing a concept design, constructing a new facility project or commissioning the building services to a project.



# Another successful year for Austin

*Providing High Technical Solutions for New and Existing Customers.*

We are delighted to report that we have had another successful operating year by undertaking some high profile facilities, both new and upgraded, for our clients.

We have achieved our aim to provide high tech solutions on projects in a carefully selected array of markets, ranging from Pharmaceuticals and Life Sciences to Higher Education and Government, both in the UK and abroad.

These particular markets remain active and, despite the "Brexit" results, show little signs of diminishing. By satisfying our clients, not only with results, but also with a high level of service, we are

confidently looking forward to having another satisfactory report to submit next year.

Another gratifying element of our results for the last year has been our repeat business with established customers along with some notable newcomers such as Ipsen, Public Health England, Procter & Gamble, Royal Holloway University of London.

If you are in need of new or upgraded quality facilities we, at Austin, look forward to assisting you when required.

*Prakash Davda*

Prakash Davda, Managing Director



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