# Pharmaron UK Limited

## Fleming Building, Phase 2

In the last update we described how Austin had completed the detailed design for the Phase 2 development of the 2nd floor fallow area of the Fleming building for Pharmaron, Hoddesdon, into a suite of Process Chemistry laboratories and offices.

Pharmaron subsequently wished to undertake rapid development of the facility and requested The Austin Company to begin the process of procurement and construction.

As part of this project, a number of enabling works were undertaken. These included the provision of new welfare facilities and additional car parking at the rear of the site. This meant that the physical day to day running of the facility would not infringe existing operations during the extensive renovation and overall project work required.

Construction of the project was carried out under restrictions imposed by the recent COVID-19 pandemic. The Austin Company recognises the effort put in by the team members who undertook the difficult and technically demanding redevelopment works, whilst upholding excellent working practices and adapting to the physical restrictions imposed on the workforce due to the nature of the site environment at the time.

Recent national and international supply chain pressures meant that the closing stages of the project presented additional challenges that would not be seen in a normal year. The Austin Company liaised regularly with the Pharmaron team to make sure that all such challenges were discussed and appraised in full with clarity and transparency being of the upmost importance. Austin adapted the materials and equipment specified, and modified the design where required to mitigate challenges as they arose.

The completed facility provides seven additional process chemistry laboratories with 58 fume cupboards, support laboratories, open plan and cellular offices and meeting rooms. The project is in its concluding stage with the commissioning activity nearing finalisation.

# Confidential Blue Chip International Client

## Spray Dryer Solvent Upgrade Project

Our Client operates a pharmaceutical spray drying service on their site as Contract Manufacturing. Currently capable of processing excipients with secondary drying via a vacuum paddle dryer. A larger scale existing spray dryer in the building is currently only capable of processing aqueous solutions and has no secondary drying provision.

Our Client's requirement includes upgrading of the existing spray dryer to be capable of processing organic solvents (including dichloromethane). In addition to the upgrade of the spray dryer, there was a requirement to add a contained solids charging system for making up feed solutions/ suspensions, and a secondary dryer of a suitable capacity. The scope also entailed upgrading of room finishes such that they are suitable for drug product intermediate handling.

Austin developed the concept design and then participated in a three-day LEAN workshop for the project at which a revised set of client requirements for the project were established. We were subsequently commissioned to undertake a revised concept study for the project based on the previous studies.

The project includes:-

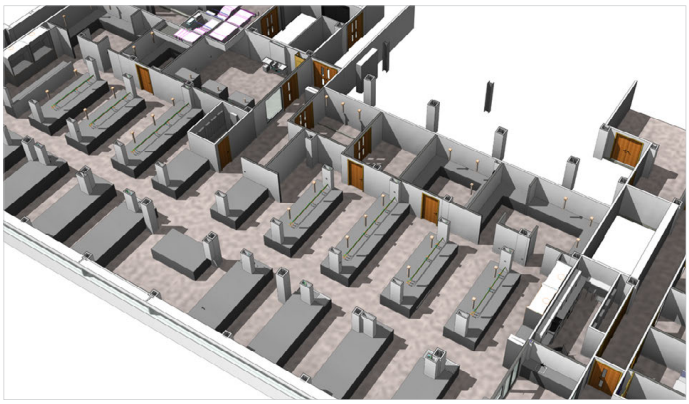
- Enabling works for services diversions
- New site entrance and vehicle turning facility
- Dismantle and removal of existing process equipment
- Grade D facility with corridor, PAL, MAL, WIP store and wash room
- Grade Secondary Dryer area
- Grade D vessel area
- Upgrade spray dryer tower for solvent use
- 3 No. reactor vessels
- -25°C chiller
- -50°C chiller
- Diverting arrangement from cyclone to pack off
- Separate CIP system

The revised Concept Study report with cost estimate and programme were generated with Austin's process partner. We are now instructed to undertake a Preliminary Design and Engineering Study (Basic Engineering Study) to develop the design for a ±10% cost estimate. This exercise is ongoing and expected to progress to detail design and construction route using The Austin Method®.

# Pharmaron UK Limited

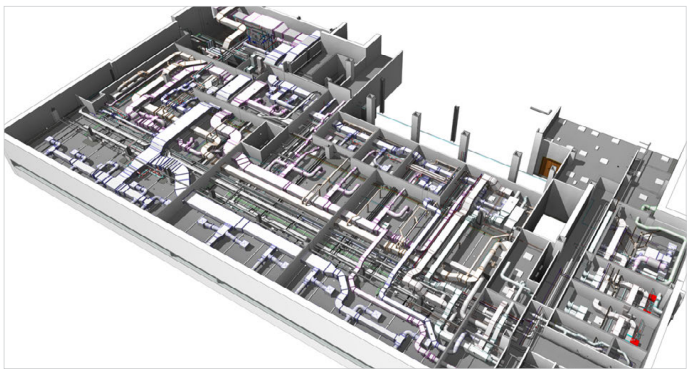
## Pharm Ops Facility

Following the completion of a number of feasibility studies and building assessments of the existing Pharm Ops building, The Austin Company completed a preliminary design study for remodelling parts of the building to provide new GMP Formulation and Analytical Chemistry accommodation. The study included a ±10% cost estimate and was completed and submitted to Pharmaron in December 2020.



Pharmaron subsequently appointed Austin to progress to the next stage, which was the detailed design and engineering of the project requirements to a sufficient level to allow procurement and construction to progress.

During the preliminary design stage it was identified that in addition to carrying out the main detailed design and associated construction works, the project would benefit from undertaking certain elements of building services work before the completion of the detailed design. These elements, included the upgrade of the complete BMS system and some process utility systems, linked to site wide and building specific requirements. At the outset of the project, these elements were to be dealt with separately. As the project progressed, it became apparent that there would be significant benefits to integrating these within the main detailed design process. These additional works were brought onboard within the overall project and handed to Austin to undertake during the construction phase.



Austin also developed requirements with the stakeholder for a new purified water system and a new nitrogen generation plant. Austin engaged directly with the suppliers for these specialist direct impact systems. The project required a new API dispensing facility which has been integrated within the confines of existing GMP areas.

Site preparation and early works began in March 2021 and will continue with structural works and building modification before moving into the fit-out stage later in the year, with completion planned for 2022. The Austin Company look forward to reporting back on progress within the next update.

## Sigal Biosciences

Pharmaron decided to expand their Biosciences departments and appointed Austin to review development possibilities within their existing building stock at Hoddesdon to house the required facilities.

We prepared and developed concepts for the facility to be located at the ground floor of the Fleming building. However, further developments within the company's site development strategy, meant that the option had to be reconsidered and an alternative solution sought.

The preferred option that emerged was to convert the first floor of the existing Sigal building into a series of interdependent laboratories, a range of laboratory support facilities suitable for three interrelated departments, as well as office facilities designed to provide an uplift on the existing site wide standard.

Following facilitation with the three individual laboratory team leaders, the preferred concept design was developed and reviewed regularly with the stakeholders. With the buy-in from the entire Pharmaron team, this design has now been developed into a detailed design to be followed by procurement and construction activities.

The detailed design takes into account constraints and challenges of the existing building which was originally built for office use with limited floor-to-ceiling heights resulting in minimum ceiling voids for services distribution. This resulted in extensive coordination and integration of the highly technical, complex and demanding mechanical and electrical services provisions within the existing ceiling voids. This meant locating primary air handling plant and ductwork distribution at roof level, leading to pre-application planning consultations. The added complexity included consideration of structural load bearing capacity and the integration with parallel projects happening elsewhere within the building.

The concept design was developed beyond The Austin Company's normal benchmark in order to fast track the detailed design and move into the construction phase as quickly as possible. The resultant detailed design is both progressive and innovative, with well-designed spaces integrated to benefit the staff in the laboratories as well as within the office spaces.

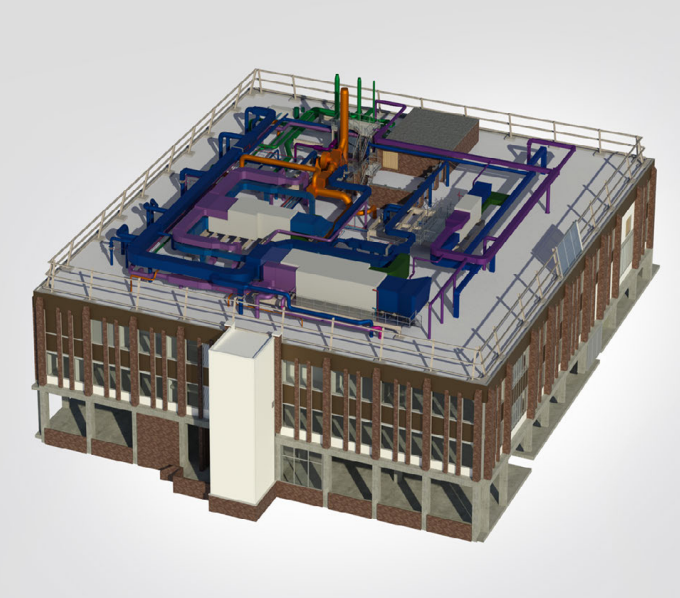
## Site Wide Planning Support

Pharmaron approached Austin to review and manage a number of key strategic planning application requirements at their Hoddesdon site. This was required in order to meet their overall business objectives and strategy to facilitate the growing demand for their services.

The current national and global issues had meant increased pressures on the local authority's planning services and it was challenging for Pharmaron to directly engage with their normal liaison.

We used the Pre-application process to identify specific areas where there may be complications or challenges in obtaining permission for the proposed project(s). After obtaining positive and supportive feedback from Broxbourne Council, we undertook the formal engagement with the local authority planning team on behalf of Pharmaron.

Four varied applications for differing areas were submitted on behalf of Pharmaron, solutions were developed and implemented. Where requirements were complex and a more robust approach was necessary, the Austin team developed the solutions to facilitate negotiated resolutions beneficial to both parties.



# Bio Products Laboratory (BPL)

## Building 27 Replacement of Substations C&D

Austin completed the detailed design for this project and subsequently, progressed with competitive tendering, appointed of supply chain to deliver the physical works.

This procurement stage involved the procurement of key packages, such as:-

- RMU and transformers for free issue to the Switchpanel manufacturer
- Packaged substation units comprising of the HV equipment and LV switchpanel in a GRP enclosure, fabricated off site
- SCADA system to allow the control and monitoring of the HV and LV equipment and metering. The system was completed and commissioned off site pre-installation work
- Standalone 110V AC UPS in a dedicated GRP enclosure, fabricated off site
- Construction of steel platform on the roof of the building to accommodate the 3 No. GRP enclosures

The scope included the existing HV ring within the building which was extended to link in with the two new replacement RMUs. Plus all outgoing LV circuits from the new substation, in some cases in its entirety new to the existing load centres and in other cases to predetermined locations where they were jointed to existing cables.

The key challenges for the project were:-

- Arranging specialised crane lifts for weights of components in excess of 10 tons within the limited space available
- Working with the BPL and our subcontractors during COVID-19 pandemic and associated restrictions
- Ensuring that appropriate risk assessments were conduced to minimise disruptions during transfer of circuits from existing to new substations
- Transfer of critical circuits within a restricted window of opportunity, only available during planned building shutdown

The project was successfully completed during the shutdown with the new substations and the existing circuits energised and in operation.

## Replacement of Distribution Boards

BPL appointed Austin to support them in carrying out a phased replacement of approximately 28 distribution boards on their Elstree site.

The distribution boards are a critical component of the building services infrastructure supporting production and research functions. Their robust operation is necessary for providing resilient power to the building's electrical services.

Austin's scope involved detailed intrusive site surveys of each board and the space in which they were installed, followed by the preparation of the detailed design documents that for procurement of the new requirements.

The key design criteria were:-

- Detailed site survey of individual circuit cables for each distribution board
- Protection calculations to BS7671
- The new boards must be of a specific manufacturer
- Boards to be IP2X without cover and IP3X with cover
- Metering system to be integrated
- 10% spares allowance for the future

The critical success factors for the project were:-

- Replacing all boards in a phased manner to minimise disruption and shut down to critical loads
- Effective integration of associated switchgear and junction boxes
- Ensuring long product lifespan and lifetime vendor support
- Common and consistent metering strategy
- Minimal maintenance requirements
- Opportunity to establish multi-site commonality with resultant economies
- Opportunity for rationalisation and efficiency in terms of spare parts provision

The detailed design was undertaken in 2 Phases to match the Shutdown Plan.

# Meducan Limited

## Concept Design

Meducan are a Welsh based company looking to establish itself as a market leader in the manufacture and supply of medicinal cannabis and CBD products within the UK.

Meducan approached Austin to assist them with preparing a Feasibility/ Concept design and strategic planning of a phased approach development. The facility is designed to achieve a highly controlled and moderated environment that will utilise the latest aeroponics technology in producing specific strains of cannabis for the biomedical market.

This entailed Austin working with international suppliers of specialist, commercial, aeroponics bloom cultivation and automated monitoring systems, as well as the Meducan team of widely experienced and multi-skilled members. Our team of multidisciplinary designers and engineers developed a three phased strategic roadmap to achieving a targeted volume of production that meets Meducan's business plan and strategic requirements.

The proposed site is earmarked as a greenfield site, with established international air linkage and proven logistics capability. Our team worked with Meducan to assess the overall project required output capability all the way through to the site services provision.

The initial stages of the project will see Meducan establish and operate a one bloom room facility that will enable them to obtain both a license from the Medicines and Healthcare Products Regulatory Agency (MHRA) and a Specialist license from the Home Office. This will permit Meducan to develop its medical cannabis flower for companies which specialise in the extraction and development of medicinal products for European distribution.

The key requirements were to advance the concept to allow for the development of future phases to increase production to target capacity when required.


# Confidential Blue Chip Global Client

## LCR3 Server Room Project

Our Client, to meet their Global Standards, made a strategic decision to develop a new grade LCR3 server room in a designated building on their site.

Austin was appointed to carry out a preliminary stage design together with the provision of a ±10% cost estimate and supported with a programme for progressing to detailed design and construction stages.

The original study was for the server room to be in the rooftop plant room.

An important point that emerged from the structural assessment of the plant room floor slab was that the load bearing capacity could not meet the criteria of 1500kg/m$^2$ without significant and disruptive strengthening measures.

Our Client identified an alternative location on the ground floor of another building that proved to be more suitable.

Austin progressed the design of the server room in the new location using a 'linear' arrangement of the 10 server racks with N+1 in-row cooling units and a cold aisle formed with the wall. The design included two separate power streams involving two fully rated UPS units, and a gas fuelled standby generator.

Our Client stipulated that the existing Isolator area in the building was to remain available to research teams for conducting ongoing work.

Constructing the walls and ceilings for the server room area without disrupting the research activity was identified as a significant constraint and therefore, as part of an early works programme, Austin surveyed and provided designs for a new full height dividing wall. This would allow the construction activity to be carried out without affecting ongoing research in the adjoining Isolator hall.

In addition, the design included the isolation and strip out of existing mechanical and electrical services from the designated server room area, provision of fallow area lighting and power for the server room area, plus provision of new power and containment linking the server room area to the existing plant room in the building.

"DELIVERING SOLUTIONS SAFELY."

– The Austin Company –

# GW Pharmaceuticals

## Building 755 Project Support, BDP Manufacturing Facility

Austin continue their relationship with GW Pharmaceuticals and are assisting GW on a new facility by providing Project Management and Commercial Management secondment in delivering this exciting project.

# Managing Director's Update

## 2021 Recognised for Teamwork

As I look back on last year – a period of change, uncertainty, restructure, and rebuild – it is remarkable what effort the Austin team have made to support our loyal Clients, the perseverance, patience and commitment they have all shown.

It is testament to the structure of the company and the agility of its staff, that the pressures of the current climate were dealt with efficiently and professionally whilst keeping all our clients fully appraised of the developments.

Over the past 18 months we have stayed focused, overcome obstacles and challenged the limits, and together achieved results that we can only be proud of.

The Austin Company of UK has a rich history, full of memorable events and great accomplishments. The year 2021 has been an exceptional year for Austin and I am delighted to announce that after 15 years we have rejoined The Austin Company.

The Austin Company was established some 140 years ago in Cleveland, USA by a young Englishmen from Grantham – Samuel Austin. He then expanded the business into Europe and in 1938 started The Austin Company of UK. Both Austin US and Austin UK have established a strong reputation and loyal customer base for manufacturing, pharmaceutical, life sciences, biosciences, and food & beverage markets.

In 2006, Kajima USA acquired The Austin Company. The same year The Austin Company of UK became a privately owned business. We now look forward to our reintegration and working with our colleagues in USA and to their extensive support around the world as we enter this new era and support our clients in their existing and new ventures.

I would like to express my gratitude and thanks to our clients for entrusting us with their important and exciting projects that inspire our talented Designers, Architects, Engineers, Construction and Project Managers to pursue growth, strive for innovation, and find creative solutions.

I thank all of our subcontractors and suppliers for their professional and invaluable support in achieving our goals.

I look forward to 2022 with enthusiasm and in anticipation that we can overcome the COVID crisis and get back to normality.

Prakash Davda, Managing Director


# 2021 RoSPA

## 4th President's Award and 13th consecutive RoSPA Gold Award for Austin

We are pleased to announce that, in recognition of continuous improvement philosophy in Health & Safety, Austin have earnt their 13th consecutive RoSPA Gold Award.

Austin prides itself on its positive safety and quality management system with its strategy to provide excellence in Health & Safety performance. This not only ensures compliance to the applicable legislation but takes personal wellbeing beyond best practice, and into excellence in behavioural based safety.

Our operations are focused on providing all our clients with exemplary management practices as well as promoting worker engagement in all aspects of workplace tasks.

Thank you to all our staff and our supply chain for their efforts in promoting good Health & Safety practices throughout all our projects. Let's keep the good work!