DESIGN & ACCESS STATEMENT (V2)

Erection of 1 no. B8 storage and distribution building and associated access and external works at land adjacent to H-Pack, Davy Way, Llay.

1.0 Contents

2.0 INTRODUCTION

2.0 Introduction

This Design and Access Statement has been prepared by RGP Architects on behalf of H-Pack Packaging UK Ltd (H-Pack) to support a full planning application for the erection of a storage and distribution building (Class B8) including ancillary (integral) offices, creation of a service yard and dedicated parking areas for cars, with associated access and servicing including a new vehicle access point from Rackery Lane (for cars only) and modified vehicle access work to Davy Way (for HGVs only), new landscaping and other works.

To facilitate H-Pack's proposed storage and distribution requirements the building will have an internal footprint of circa 160,000 sq ft (14,865 sq m) with further circa 5,134 sq ft (477 sq m) of ancillary office accommodation at first floor level.

The purpose of this statement is to consider the site, its context and physical constraints and outline how the proposals respond to these in an appropriate manner. Matters of access are also covered within this document.

The statement should be read in conjunction with relevant reports submitted with this planning application, which are referenced where applicable throughout the report. For any information on local or national planning policies please refer to the accompanying Planning Statement prepared by Cassidy & Ashton.

2.1 H-Pack Packaging UK Ltd Company Background

H-Pack Packaging UK Ltd was established in 2016 as the UK & European arm of Hotpack Packaging Industries LLC Group (Dubai, United Arab Emirates). Incorporated in 1995, Hotpack UAE has grown to become the largest manufacturer & distributor of food packaging materials and solutions in the Middle East.

Operating from 2.2 million square feet of factory space & located at 14 Gulf locations, Hotpack Packaging Industries LLC, manufactures over 3000 packaging products which made from a wide variety of base materials including paper, aluminium, foam and bio-degradable plastic. H-Pack have 25 branches across the globe along with a chain of network partners within Asia, Africa and Europe. With over 1500 employees, they supply premium quality products within a tightly competitive price structure to some of the largest consumers around the world.

H-Pack (UK) now serves the UK & European packaging markets from its flagship 200,000 sq. ft. factory based at Llay Industrial Estate between Chester and Wrexham. Manufacturing of eco-friendly paper & board-based products commenced from the site in 2017, whilst H-Pack also maintain a large inventory of the full corporate Hotpack range ready for immediate despatch as required. H-Pack not only offer their international premium lines but also work together with their clients to develop bespoke custom products under the latest international recognised standards and technology.

The H-Pack customer base extends from the largest government departments, airlines, international hotel chains and high street retail outlets through to wholesalers, Cash & Carry`s, supermarkets and catering companies (including restaurants and coffee shops). All the products are created by their own in-house team of designer and packed hygienically in a variety of modern and attractive ways.

Having such a large product range and reputable parentage has ensured that H-Pack have quickly established themselves as the ultimate 'one stop shop' for packaging within Europe.

Existing Hotpack facility located in Ummu Al Quwain, UAE

Existing Hotpack facility located in Ummu Al Quwain, UAE

3.0 OVERVIEW OF PROPOSED DEVELOPMENT & USE

3.0 Operator Requirements/Need

In 2016 H-Pack acquired a large 200,000 sq ft factory from Sharp Manufacturing, which had sat empty following Sharp's downscaling of operations at the facility after solar panel manufacturing had ceased at the site in 2014.

Since H-Pack took occupation of the site six years ago, the existing building has served them well, however as their products are high volume, there has become an urgent operational need to build a separate, dedicated storage warehouse on the site to release space within the building to enable the expansion of manufacturing, which is well equipped with power, gas and IT infrastructure.

Whilst H-pack's existing building benefits from a large footprint it is relatively low-rise with clear heights of around 6-8m to underside of structure, an unsuitable operational clearance for high volume storage. Due to H-Pack's ever-increasing customer demand, the existing, limited storage areas in the building have now reached maximum capacity. Consequently, to cope with demand, H-pack have had to erect temporary storage marquees within the site. Given the nature of their products, external storage is particularly susceptible to inclement weather

As can be seen on the submitted plans, within H-pack's title is an area of undeveloped additional land within the western portion of their site. H-Pack's long-term objective was to utilise this land to construct a large storage warehouse once the existing building reached maximum capacity. Having now reached this point, H-Pack now have an urgent business need to construct this facility to enable operations on the site to expand and the business to grow.

This new, purpose-built facility will be able to accommodate high-bay racking facilities and state of the art picking technology, which the existing building simply cannot accommodate.

The construction of a new high-bay, secure warehouse space, insulated to current standards, will radically improve the company's ability to operate from the site by enabling the storage of a wider range of goods and finished products, whilst utilising modern picking and cataloguing procedures and technologies. This will significantly improve the offer and efficiency of H-Pack's on-site operations, as they continue to grow and thrive as a key local business.

3.1 Use & Operator Operational Brief

To meet H-Pack's operational need and site expansion plans, the new building is required to store finished goods that will enable the release of floorspace within their existing facility for more manufacturing.

The maximisation of new internal floor space is of key importance to H-Pack, whilst balancing other aspects of the proposals, such as the requirements for unimpeded vehicle movements for servicing and close operational links with their existing building.

To fulfil H-Pack's operational brief, the new warehouse building chiefly needs to comprise:

- Maximization of warehouse space over a single floor level. This will require a completely level floor plate to facilitate forklift movements across the warehouse floor.
- Based on volumetric demand a clear internal height to underside of building structure (i.e., underside of steel haunch) of 20m to accommodate state of the art high-bay racking systems.
- Ancillary offices over two floors within the envelope of the main warehouse building. These areas will include fully serviced office space for warehouse management plus an array of welfare facilities (WC's and canteen/kitchen areas, showers, changing facilities and the like).
- 12 HGV dock leveller bays for efficient loading and dispatch of goods
- 1 level access door with 7m clearance to enable the transfer of goods in and out of the facility via forklift

The external service areas and wider site layout are also of critical importance to H-Pack's operational requirements. In summary this need to:

- enable unhindered vehicle movements across H-Pack's site for efficient deliveries of raw materials to the existing facility and dispatch of goods from the new warehouse. This includes provision for two-way HGV movements between the proposed and existing buildings
- Allow adequate space for HGV movements using the building's docking facilities
- Include well-planned staff parking facilities with provision for alternative means of transport for staff
- Improve existing HGV access into the site where feasible.
- Include provision for vehicle access to the full building perimeter to enable unhindered access for fire engines and building maintenance vehicles (e.g., scissor lifts and cherry pickers)
- Include clearly defined vehicle routes for staff and visitors accessing the site by car or other transport means

To achieve the above H-Pack require a clear, well-managed vehicle movement strategy for the site that separates HGVs from staff and visitors accessing the site.

Internal photograph of typical logistics building with high-bay racking

4.0 SITE ANALYSIS

4.0 Site Location and General Context

The site is located at Llay industrial estate and is approximately four miles north of Wrexham and twelve miles south of Chester. The site is approximately two miles from the A483, a dual carriage way that leads to the A55 and the wider motorway networks beyond, including the M53, M56 and M6.

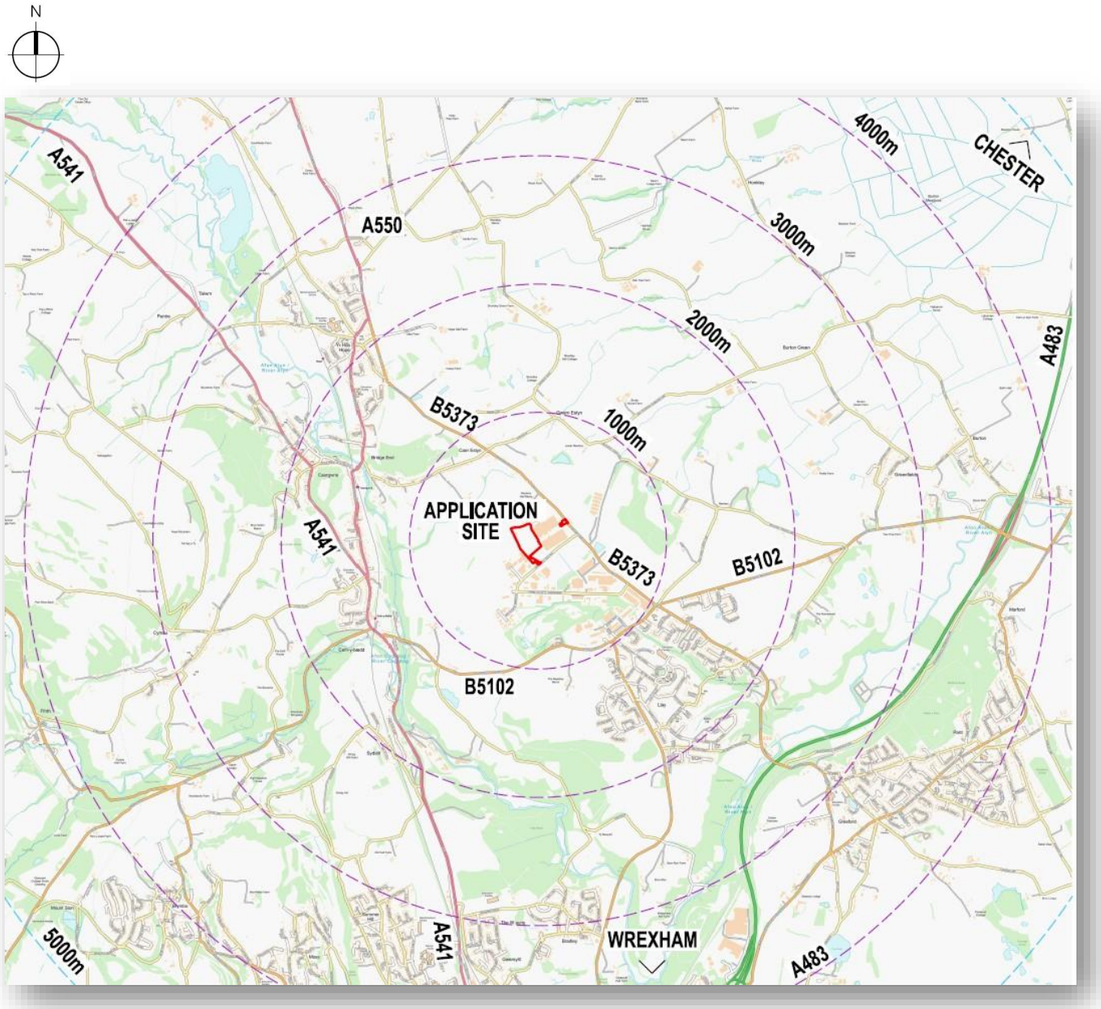
The existing H-Pack premises are situated between Davy Way to the south and Rackery Lane to the East with an overall site area of approximately 6.8 hectares. The site sits at the northern edge of the Llay Industrial Estate, a designated local employment area comprising a range of small-to-medium scale industrial buildings that house various light manufacturing facilities, storage and trade-counter type units. Adjacent the site and to the south of Davy Way is the North Wales Police building.

H-Pack's title (denoted by the blue boundary on submitted drawings) is broadly L-shaped in form, wrapping around the existing Sharp building and its curtilage. The ownership boundary extends between Davy Way to the south and Rackery Lane to the east. The Sharp and H-Pack sites were formerly one single, larger title that was split into two following the downsizing of operations by Sharp in 2014. Sharp's adjusted title retained the main vehicular access from Davy Way, whereas H-Pack assumed the narrower access further west along Davy way and adjacent the North Wales Police Headquarters. Sandwiched between H-Pack's internal access road and Davy Way is Sharp's surface level staff car park.

To the north and west of the of the site are a wide expanse of open fields and farmland that extend towards the villages of Caer Estyn (approximately one kilometre to the north) and Abermordu (approximately two kilometres to the west). Also located along the eastern edge of the site are a series of low-rise industrial units housing Marlin Industries, a cable drum manufacturer.

The application site itself is split into two parts with the main portion, where the new warehouse is proposed, located within the north-western corner of H-Pack's title and extending southwards towards Davy Way along their existing access road. The second, smaller portion of the application site is located at the eastern edge of H-Pack's title and connects to Rackery Lane, where the proposed new vehicular entrance will be located.

The H-Pack and Sharp buildings are located to east of the main body of the application site and comprise large industrial buildings of equivalent footprint, circa 200,000 sq ft each. As once part of a single development owned and operated by Sharp, the buildings are broadly the same in terms of size, height and appearance. In terms of footprint these are the by far the largest buildings on the Llay estate. Further east are several detached residential properties fronting onto Rackery Lane with farmland beyond.



4.1 Site Description

Main Application/Development Site

The full extent of the application site is shown on the Location Plan submitted with the planning application (RGP drawing no. 11373-PL-L01 Site Location Plan))

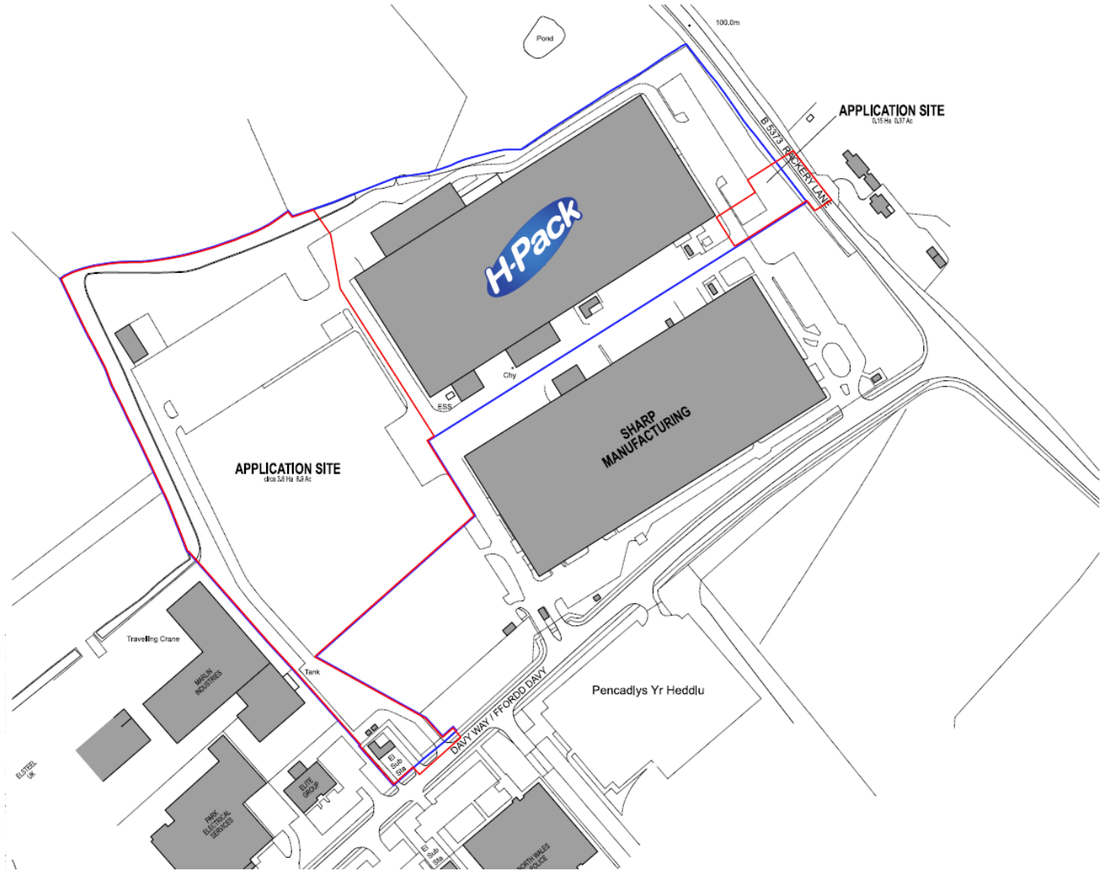
As can be seen on the submitted plans the main body of the application site predominantly comprises relatively level areas of grass and concrete hard standings.

Hardstanding areas are used by all vehicles accessing the premises via Davy Way (including HGVs and staff arriving by car) and some ancillary container storage. More recently, hardstanding areas have been used to locate temporary marquees to accommodate additional storage to alleviate pressure on the main building itself.

Along the northern and western boundaries are belts of established landscaping comprises numerous trees (of varying height, age, condition and species) plus areas of self-seeded low-level scrub. Within the northern landscaping belt is a grassed bund that raises above the general developable area of the application site.

An internal service road running north-to-south that links the front and rear delivery areas of H-Pack's premises forms the eastern edge of the application site, whilst Sharp's surface level car park bounds it to the south with a line of security fencing between.

Where the site adjoins Davy way there is a substation compound enclosed with Palisade fencing that serves both the H-Pack and Sharp buildings. Consequently, there are numerous below ground electrical services running through the application site, which have been subject to trace surveys.



Rackery Lane Application Site

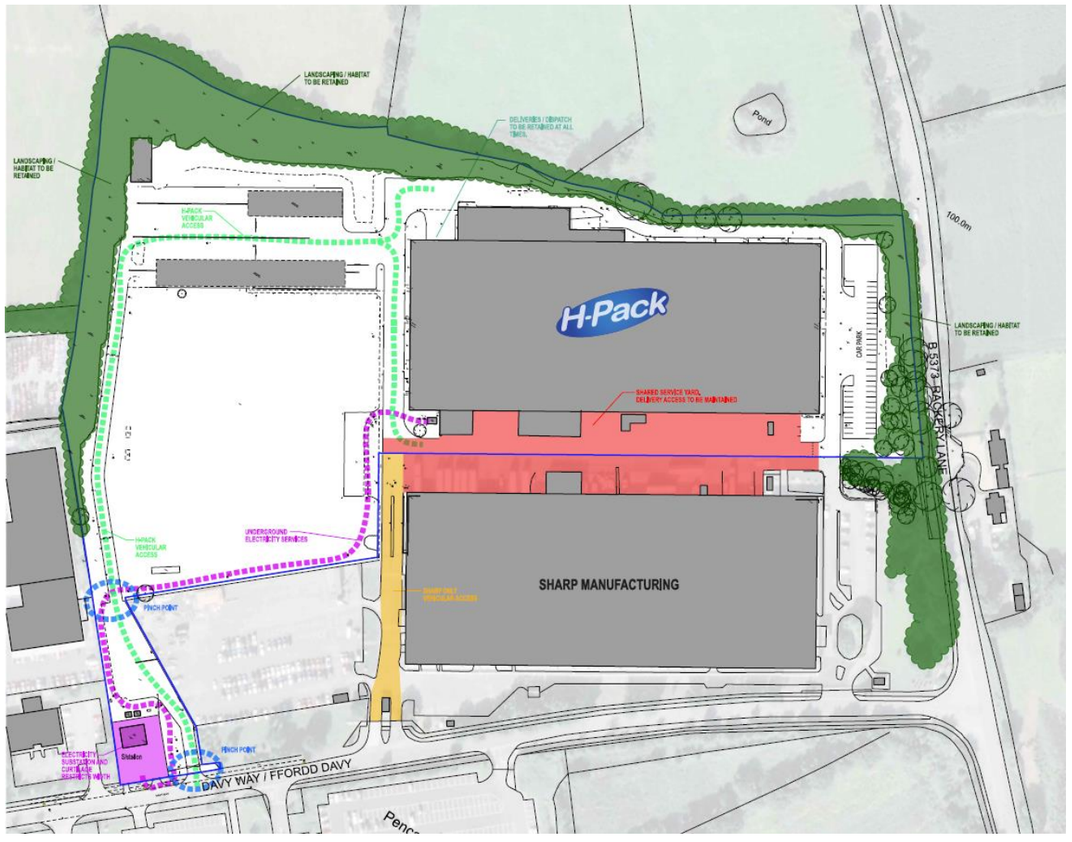
This smaller portion of the application site is located to the east of H-Pack's title in the area between Rackery Lane and the eastern/entrance elevation of H-Pack's premises and includes part of H-Packs staff/visitor carpark.

Rackery Lane is elevated above the general level of the Car Park with landscaped banking between. This landscaping, that fronts on to the highway is reasonably well-established and includes low-lying, self-seeded scrub plus numerous established trees of varying age, height and condition. This vegetation has been subject to survey by an arboriculturist, with the report submitted as part of this application.

4.2 Key Site Constraints

A site constraints plan has been prepared as part of this application, RGP drawing reference 11373-PL-L05, with an extract image included below. This identifies key factors that have influenced and dictated the submitted proposals, which briefly include:

- Constrained width to existing access road from Davy Way due to location of substation compound and pinch point in land titles at north-western corner of Sharp's surface level car park , denoted by the purple shade and blue circles.
- Location of underground electrical services between the substation and the existing H-Pack premises, denoted by the purple dashed line
- Sharp's dedicated right of access to the shared service yard, denoted by the yellow and red shade
- Operational requirement to maintain unhindered HGV routes to the building during and after construction of the development to minimise disruption to ongoing site operations, including deliveries and dispatch, denoted by the green dashed lines
- Retention of landscaping where feasible to maintain habitats zones and opportunities for biodiversity, denoted by the green shade



Extract from submitted Site Constraints Plan

4.3 Existing Site Levels

Prior to the application, a topographical survey was commissioned to ascertain accurate level information across the site and its boundaries. This information is critical as enables the determination of suitable site gradients and building floor levels. In addition, this will also:

- minimise the removal of site material during construction and thus determine an optimum building level
- enable engineers to devise a workable drainage strategy
- determine proposed development levels and gradients that coordinate with the fixed perimeter levels that are: operationally workable for HGV movements and compliant with relevant Building Regulation guidance for inclusive access.

Main Application/Development Site

Whilst the developable area of the main application site is predominantly flat, some observations identified by the survey are briefly summarised below:

- At the existing Davy way access there is an incline of approximately 1 in 17 as the road rises from levels of 96.2 AOD to 97.6 AOD to the north of the substation compound.
- East to west across the application site there is a fall of approximately 1 meter with levels ranging from 99.9 AOD to 98.2 AOD to the western boundary, the finished floor level within the existing premises is 99.96 AOD.
- The landscaped bund is rises to approximately 2m above the developable site area with levels of around 100.7 AOD to top of banking.
- Hardstanding levels along the western boundary are generally level.

As part of the topographical survey heights of exiting trees along the western and eastern boundaries were measured, which range between approximately 5m to 15m in height.

Rackery Lane Application Site

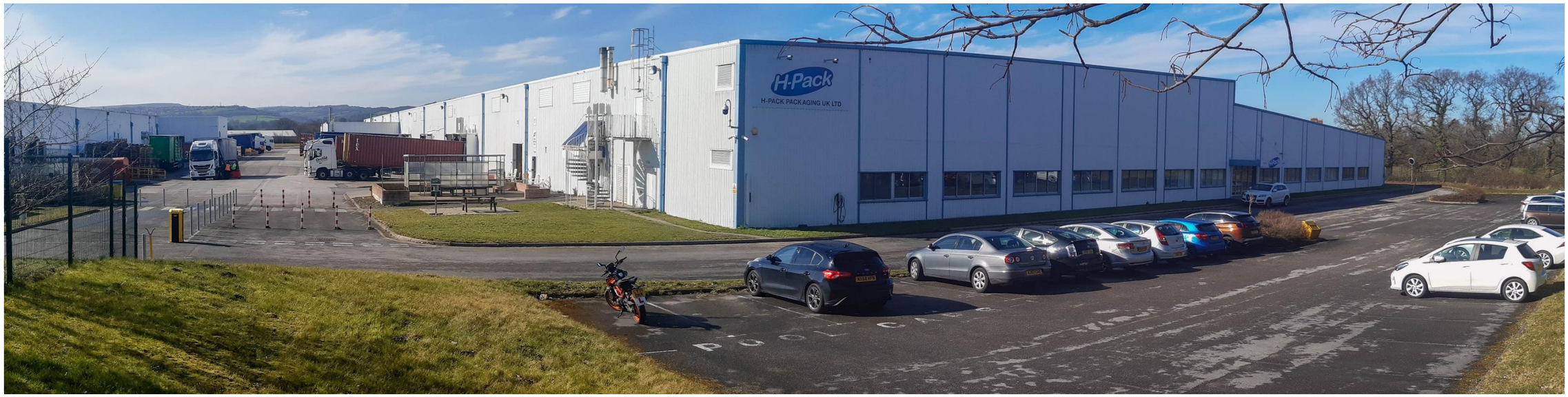
As noted, Rackery Lane is elevated above the general levels of the H-Pack's staff car park with banked landscaping in between. Typical Rackery Lane levels are in the region of 101.5 AOD, whereas the access road to the car park has levels in the region of 99.9 AOD, a level difference of approximately 1.6m. A new vehicular access link is required to factor this level transition into account.

5.0 SITE PHOTOGRAPHS

Stitched panoramic photograph northwest from the vehicle access across application site, showing the existing temporary structures centrally, existing facilities to the right, and established perimeter landscaping to the left.

Stitched panoramic photograph northeast from the proposed yard area, across application site, showing the existing temporary structures centrally, existing facilities to the right, and established landscaping beyond.

Stitched panoramic photograph northeast from the existing shared yard area, showing the H-pack buildings, with the application site to the left.



Stitched panoramic photograph westwards from the secondary application, showing H-Pack's exisitng building with their surface level staff car park to the right and the shared service yard to the left

Stitched panoramic photograph taken at the existing vehicle entrance looking southwards towards Davy Way and the North Wales Police building

View looking northeast along Davy Way.

Existing electrical substations adjacent to the vehicle entrance.

View from Davy Way looking northwest into the site.

Existing internal vehicle route with Marlin buildings on the right

View northwards along existing internal vehicle route with temporary marquees in the distance

View westwards of proposed development plot with Sharp's surface level car park to the right and Marlin buildings beyond.

Existing boundary with Sharp's carparking

Existing temporary structures within the northern portion of the development plot.

View northwards of the temporary structures on the development plot from the internal service road

Existing temporary structures on the development plot and the existing facility to the right.

Existing temporary structures on the development plot on the hardstanding areas

Existing landscaped buffer and grassed bund along northern boundary with the temporary structures on the right

View southwards between the temporary structures and the existing facility on the right

Existing facility, viewed from the northern boundary.

Dock leveller on the north-western corner of the H-Pack's building

View eastwards along the northern boundary showing the access road leading to H-Pack's surface level car park

View westwards along the south-eastern elevation of the existing facility showing dock levellers accessed via the shared service yard

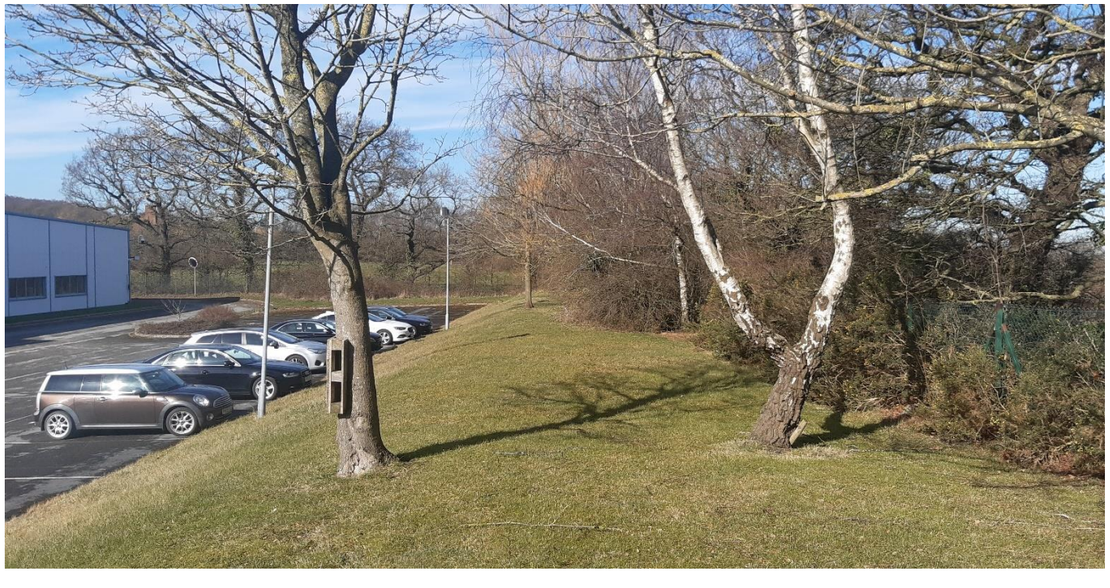
View southeast of the existing sharp facility along their designated access road

Typical internal shot of the existing facility showing current storage arrangement of good and materials

Typical internal shot of the existing facility showing how low clearances are prohibiting storage

View south-eastwards showing landscaped buffer to Rackery Lane

View south across eastern boundary towards H-Pack's exisitng facility



View northwest of the existing landscaped buffer to Rackery Lane with H-Pack's surface level car park to the right

View southwest towards the shared service area.

6.0 AMOUNT

6.0 Application Boundary Area/Site Area

As can be seen on the site location plan, the application site is split into two separate areas covering the main application site and a further, smaller, separate application area covering the new vehicle access from Rackery Lane

Site areas confirmed thus:

Application Site Area 1 (Adjoining Davy Way) 3.6 hectares / 8.9 acres

Application Site Area 2 (Adjoining Rackery Lane) 0.15 hectares / 0.37 acres

6.1 Building Area Schedule

The proposed building areas are confirmed thus:

Building/Building area	GIA sq. ft. (sq. m)	GEA sq. ft. (sq. m)
Ground Floor Warehouse	156,910 (14,578)	See GEA total
Ground Floor Office Accommodation	3,090 (287)	See GEA total
Ground Floor Total	**160,000 (14,865)**	**163,400 (15,180)**
First Floor Office Accommodation	5,134 (477)	See GEA total
First Floor total	5,134 (477)	5,780 (537)
Total (Building and Ancillary uses)	**165,134 (15,342)**	**169,180 (15,717)**

* Based upon ground floor office and warehouse space combined total

6.2 Parking Schedule to Service Areas

For operational servicing, the proposals include:

TYPE	QUANTITY
Dock Levellers for HGVs	12
Level Access bays for HGVs	1

6.3 Staff Parking

Proposed staff parking quotas have been calculated as part of Cameron Rose's Transport Assessment in relation to relevant parking standards. The additional parking to serve the new development can be confirmed thus:

TYPE	QUANTITY
Standard Bays (2.5m wide)	126
Accessible Bays	9
Total	135

6.4 Cycle Parking provision:

In line with Wrexham local standards 16 covered cycle bays have been provided.

7.0 LAYOUT DESIGN

7.0 Introduction – Key layout Principles

The site layout has developed following a process of iterative dialogue and design development between the end-user, H-Pack, and the specialist consultant team to deliver a balanced proposal that optimises the site, maximises floor space and achieves H-Pack's operational/servicing requirements, all whilst working within the parameters of the known site constraints.

To achieve H-Pack's operational brief, the resultant site layout must achieve the following:

- Provide a highly efficient layout that maximises storage volumes and optimises floor yields
- Provide good operational connectivity between the new and existing buildings, including HGV, van and forklift movements.
- Enable smooth, unhindered vehicle movements for HGVs entering and departing the site (via Davy Way) including unhindered access for HGVs accessing the loading facilities positioned on the northern and southern elevations of the existing H-Pack building.
- Provide clear separation between HGVs and cars using the site. This will be achieved via the formation of a new, dedicated access for cars from Rackery Lane
- Configured to work around existing known buried services within the site, including the below ground electrical supply between the substation and existing building.
- Retains existing landscape/habitat zones around the site's perimeter
- Introduces clear and legible staff parking areas in close walking distance to the building's entrance
- Where possible introduces additional perimeter landscaping to enhance the appearance of the site
- Enables unhindered vehicle movements for fire vehicles to the building perimeter
- Enables unhindered access for maintenance vehicles to the building perimeter.
- Incorporates workable development levels around the building to enable level access where needed (including servicing and staff access)
- Improves connectivity for cyclists and pedestrians accessing the site.
- Considers operator security requirements – including perimeter fencing and controlled access for staff and visitors

7.1 Proposed Site Layout - Overview

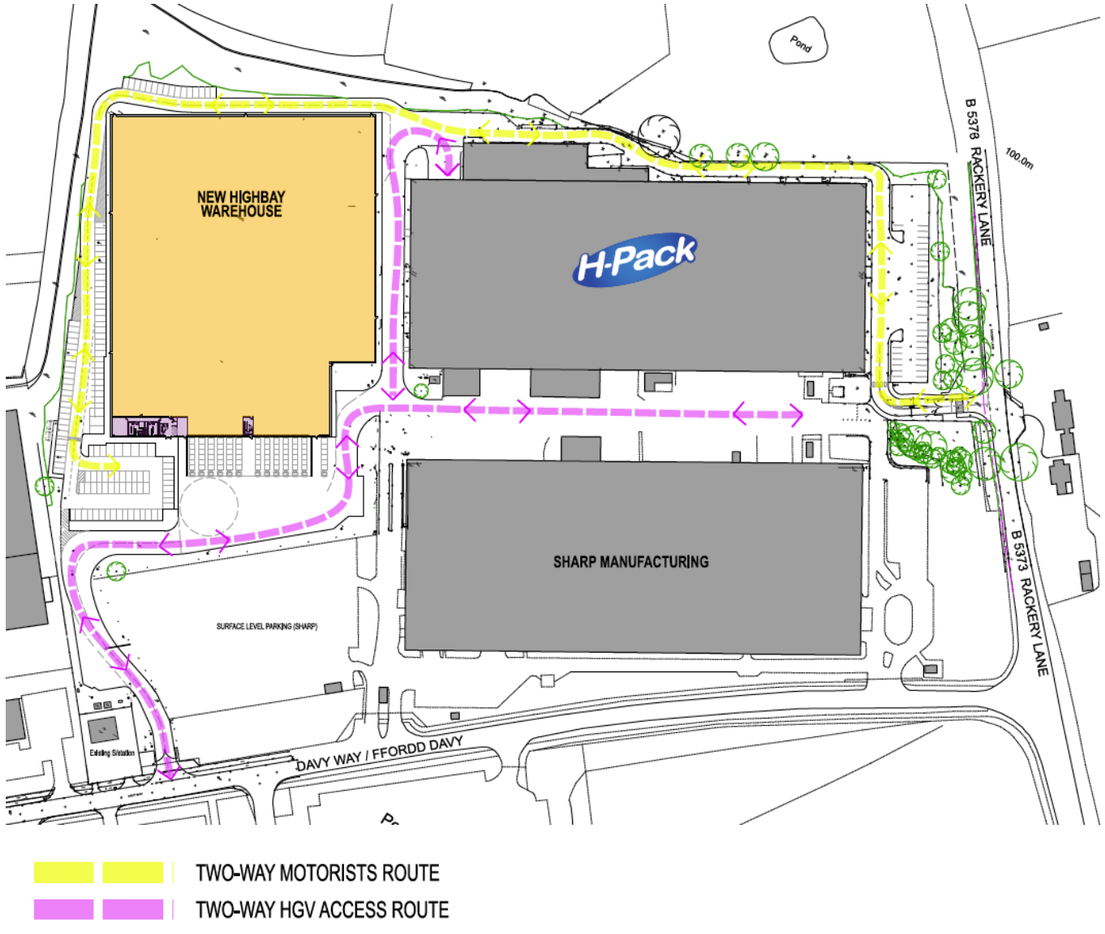
Considering the key layout principles, the position, dimensions, and proportions of the new building footprint have been determined to optimise the achievable gross internal area and fulfil H-Pack's requirement for additional storage capacity.

Positioning the service yard to the south enables close connection to Davy Way, thus limiting the amount of HGV circulation road required. The proposals also include local widening of the existing access road from Davy Way to facilitate better HGV movements in and out of the site, despite the imposed constraints of the existing substation and the narrowing width of H-Pack's title along the existing access road.

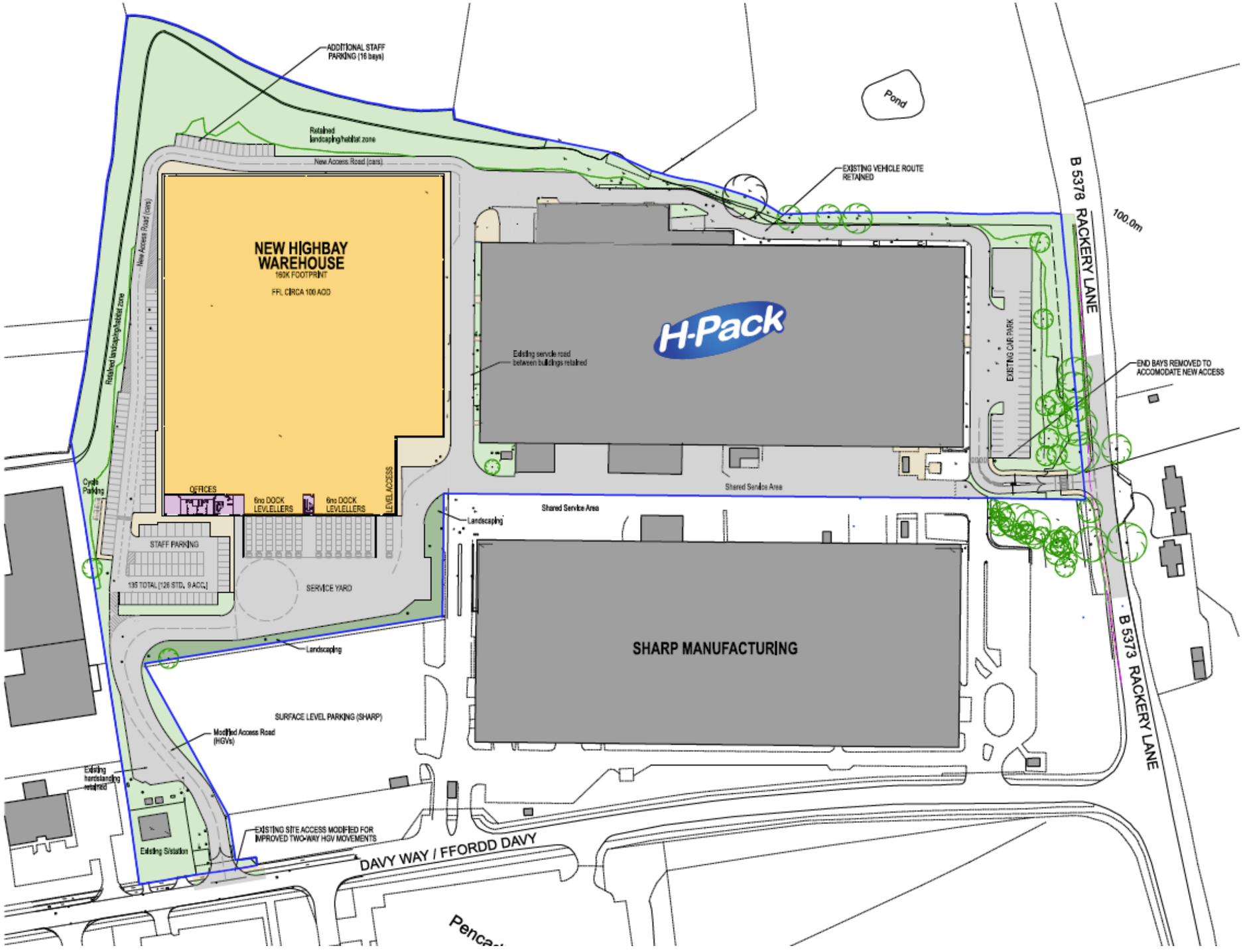
Staff parking has been configured to wraparound the south-western corner of the building extending along the western elevation, thus enabling parking bays to be in close walking distance of the principle building entrance. The parking layout has been carefully configured to aid vehicle circulation with clear and legible routes for pedestrian and cycle movements once within the site.

Retention of existing, established landscaping/habitat zones to the northern and western boundaries has been a key design parameter. Consequently, these areas are retained wherever possible, including trees. Where there is minor encroachment to existing landscaped areas, compensatory planting zones are provided elsewhere within the application site, as shown on the submitted landscaping proposals.

To Rackery Lane the new vehicle entrance has been carefully configured to minimise the removal of existing trees whilst still enabling adequate two-way access for cars with appropriate kerb radii where the road adjoins Rackery Lane, including recommended visibility spays onto the highway. Once within the site, cars join the established network of internal roads to access the new or existing surface level car parking.



Extract from submitted plan 11373 PL L09 showing proposed vehicle movement strategy within the site



1Extract of Proposed Site Layout

7.2 HGV Access, External Layout and Service/delivery Areas

As noted, the existing access road is constrained by the existing substation and a pinch point at the north-western corner of Sharp's surface level car park. Despite these constraints the access road will be widened to improve HGV movements in and out of the site and towards the new service yard. This also includes increasing the kerb radii where the access road adjoins Davy Way. New landscaping has been introduced along this road to improve and soften the appearance of the site from the south.

The new service yard has been sized to provide sufficient space for HGVs to access the row of dock levellers, whilst also factoring space for HGVs to cross the yard to access the existing building and HGV turning manoeuvres (covered further within the proceeding Access chapter). The building footprint also includes an indent at its south-eastern corner to enable HGVs to adequately manoeuvre between buildings, whilst ensuring all HGV movements are kept within H-Pack's title (where this meets Sharp's title) and avoiding the construction of foundations over the known buried electrical services.

The new perimeter road around the north and west of the building will primarily serve cars accessing the customer car park. In addition, the roadway is adequately sized and laid out to accommodate fire engines plus a range of maintenance vehicles (e.g. cherry pickers or scissor lifts)

The existing service road adjacent that runs along the west of the existing building will be retained, enabling operational access between the loading docks on the north-western corner of existing premises and the shared service yard to be maintained.

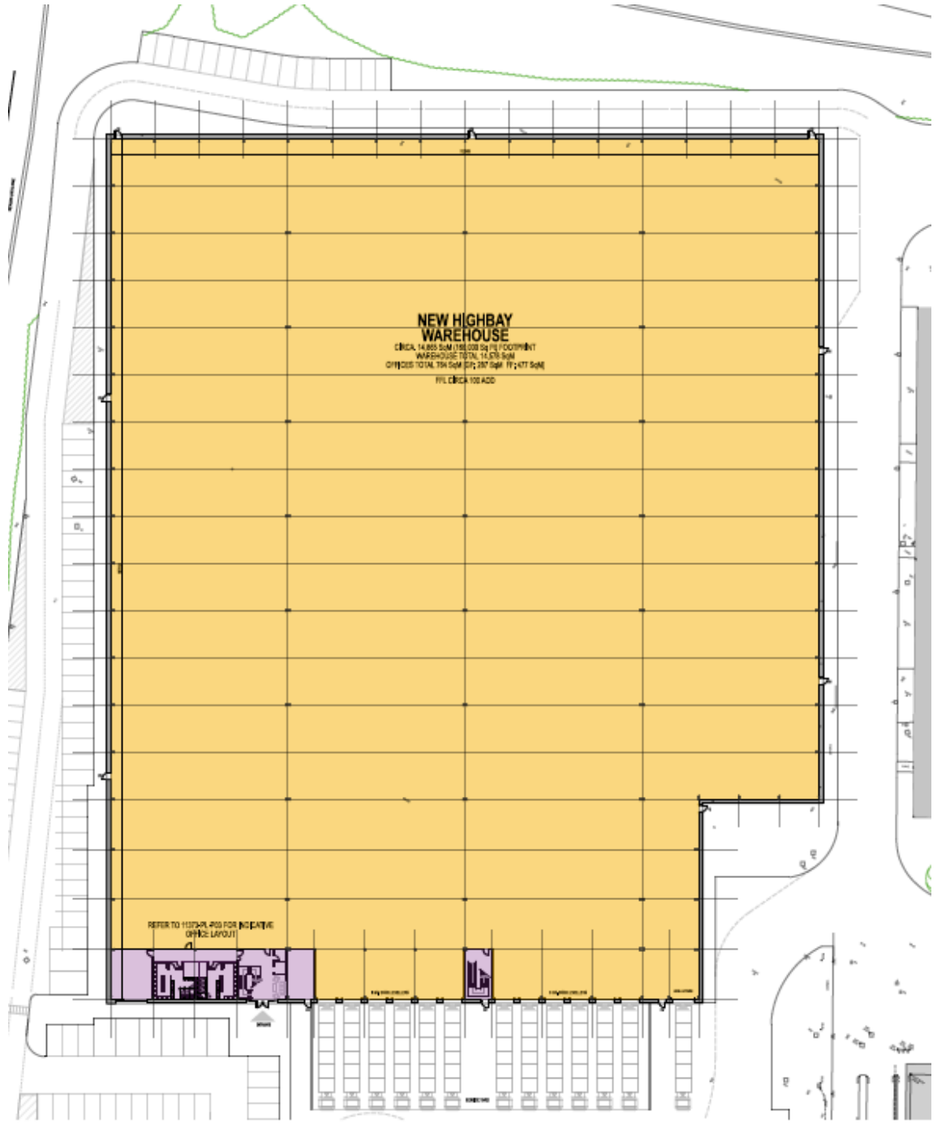
7.3 Building layout Warehouse Building, Offices & Staff Parking areas

The building footprint has been configured to maximise floor space and enable the utilisation of a structurally efficient multi-span portal frame structure that will enable wide, column-free spans within the warehouse area.

The building's main entrance is located on the building's south-western corner, as will be clearly visible upon approach to the site from Davy Way and adjacent the new staff parking area. Elevational treatments are utilised to provide a focal point to the main staff entrance on the building corner, as covered further within proceeding chapters.

Offices are orientated to provide a southern outlook for staff towards the Davy Way, whilst also providing good natural surveillance towards the site entrance and over the service areas and staff parking. Indicative internal layouts are shown on the submitted drawing with the first floor chiefly comprising the operational office accommodation and meeting rooms. The ground floor will house the main reception and bulk of the ancillary accommodation (including changing facilities and welfare accommodation for staff). To optimise the storage capacity of the main warehouse the offices will partly extend over the dock levellers, thus utilising building volume that would be otherwise unusable.

Staff parking has been configured to the south of the building, thus enabling all parking bays to be in close walking distance of the principle building entrance. The parking layout has been carefully configured to aid vehicle circulation and movements with clear and legible routes for pedestrian and cycle movements and zones for perimeter landscaping.



Extract from submitted floor layouts (RGP drawing 11373 PL P01) showing warehouse area in yellow and office areas in purple. The first floor office extends over the dock levellers to ustilise building volume that would be otherwise unusable

7.4 Proposed Development Levels

Establishing suitable, operationally workable site and building levels has been a critical aspect of design development, as must account for:

- an operational requirement for a completely level floorplate within the warehouse area (including office areas)
- limiting the amount of spoil to be removed or imported to site
- minimising regrading works to the northern and eastern boundaries to help preserve existing established habitat zones and landscaping
- Incorporating recommended operational gradients to service areas (e.g., 1 in 40) to be trafficked by HGVs and/or vans.
- fixed levels at the site's perimeter, such as the shared ownership boundary with the adjacent Sharp Car Park and the service road separating the proposed and existing H-Pack buildings
- suitable gradients for any banked landscaping, with a max fall of 1 in 2 falls for engineered banking, with limited requirements fo retaining structures
- Maximum 1 in 20 gradients to staff parking areas
- Suitable falls and levels to hardstanding areas for drainage
- Level access to building entrances for wheelchair users
- Retention of hard standings around the building where achievable and subject to condition
- establishing a suitable internal floor level that coordinates with all the above

Following assessment of existing site levels and outline earthworks analysis, it has been concluded that a building ground floor level of approximately 100 AOD represents the optimum for the site. This accounts for the retention of spoil on the site, whilst achieving the operator's operational gradients previously described. This level is approximate and may be subject to minor adjustment once construction works commence further detailed level analysis is undertaken.

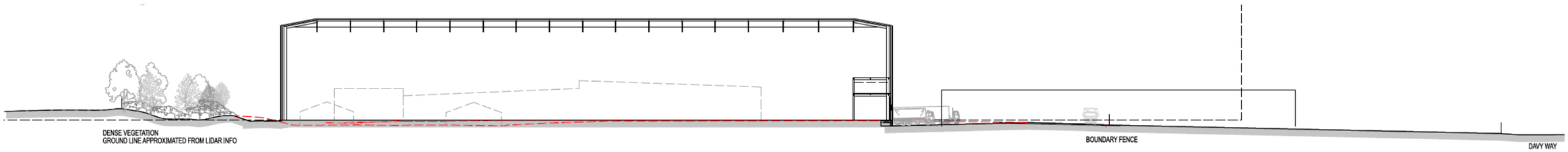
The general profiling of site levels can be seen on the proposed site sections submitted with this application.

7.5 Proposed Layout - Summary

As demonstrated by the submitted site plans, the identified key layout principles have been incorporated into the proposals. Consequently, this results in a clear, legible layout that:

- optimises the resultant building footprint
- serves H-Pack's operational requirements for internal vehicle movements (including HGVs, and forklifts)
- Improves HGV access from Davy Way
- Provides a clear, legible vehicle movement strategy that separates car and HGV movements once within the site
- works with the known site constraints, including buried services and restrictions on titles
- Retains existing perimeter landscape zones wherever possible

Provision of dock levelling equipment is key to the determination of site levels and floor levels



PROPOSED SECTION AA @ 1:500

Site section through the proposed building, site & docking facilities

8.0 MASSING & SCALE

8.1 Introduction

A study of key contextual views of the development is covered extensively within the accompanying Landscape and Visual Impact Assessment (LVIA) prepared by Ramboll Thorpe. This chapter outlines the determining factors that have dictated the massing of the proposed building and explains how measures have been incorporated to reduce the perceived scale of the development.

8.2 Massing

The massing of the proposed building has been dictated by the following principal factors:

- Building footprint size (circa 14864 sq ft GIA) as dictated by H-Pack's operational requirements for additional storage
- Clear height to underside of structure of 20m to suit H-pack's operational volumetric requirement for high bay storage and racking systems
- Calculation of proposed floor and development levels to suit topographical site levels, which has determined a proposed finished floor level of circa 100.00 AOD based on the operational requirement for a completely level warehouse floor.
- depth of portal framed structure and roof to achieve structurally efficient spans
- Setbacks from the northern and eastern site boundaries for retained habitat zones plus any supplementary landscaping
- Inclusion of a multi-span structure 6 degree roof pitches, resulting in a ridge height of circa 23m
- The inclusion of hipped roofs at the building gables resulting in a continuous eaves line of circa

Based upon the above, the key aspects dictating the building's massing are the required clear height and the building footprint. Based on H-Pack's forecasts, constructing a storage building of this volume is critical for future expansion of operations and output at the site and will maintain its viability for years to come. In respect of height, the proposed building will be the tallest on the Llay Industrial Estate, whereas the footprint will be approximately 20% smaller than the existing, adjacent Sharp and H-Pack buildings. Whilst the site is located within an established, designated employment area and fronts onto industrial uses, it is acknowledged the site also fronts onto open land to the north, west and east.

Where orientated towards open land, the building design has incorporated several key measures to soften its perceived massing:

- The inclusion of roof hips to building gables and the omission of a parapet results in a consistent eaves height of circa 21.5m above FFL.
- Horizontal colour grading using subtle tones of green, whites and greys is introduced to clad three of the building's elevations and soften its appearance from these aspects. This will help merge the building into the perimeter landscaping (described further in proceeding chapters)
- Retention of perimeter landscaping and introduction of a roadway around the building results in setback distances from the site boundary.

The retention of perimeter landscaping with tree heights of upto 10+ meters in height will provide filtered views from adjacent land and will help the building's massing to 'step down' towards the boundaries. In conjunction with a graded colour palette this will help to merge the building into the landscape when viewed from afar.

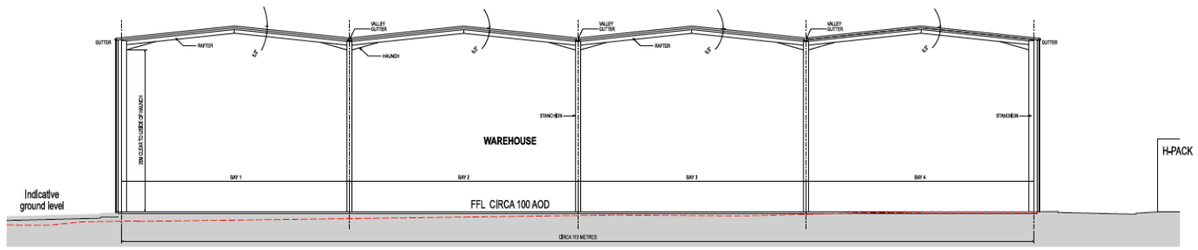


Figure 2Extract of proposed building section, the clear internal height and footprint have largely determined the overall the massing

Figure 3Aerial image of the proposed building adjacent the exisitng H-Pack and Sharp buildings, which are lower in height but with larger footprints

8.3 Scale

The distribution of cladding treatments, textures and colours have been carefully arranged to provide a strong horizontal emphasis to reduce its perceived scale and prevent the building appearing overly monolithic.

As the North-western, South-Western & North-Eastern Elevations will be visible from adjacent open fields, horizontal bands of colour, that grade from green to white vertically up the face of the building are predominantly utilised. The five coloured bands incrementally decrease in depth vertically, with a 7m 'Juniper' green band at the lower level, reducing to a 2m 'grey-white' band at eaves level.

The presence of established landscaping to the northern and western boundaries, banking along the northern boundary results in a stepping down of scale between building and the respective site boundaries. The colour palette, and in particular the use of greens, has been purposefully selected to compliment the natural tones the existing, natural boundary treatments and help visually merge the building into the landscaping when viewed from the adjacent open land. Key receptor views are covered in more detail within the submitted LVIA.

This cladding treatment has been successfully implemented on buildings of similar height and use around the UK, where the objective has been to visually 'break down' the mass and scale of the elevations on tall industrial buildings

The scale of the southern-western elevation is considered less visually sensitive as there is a considerable setback from Davy Way (of 130m +), whilst this elevation also fronts onto a predominantly industrial context. Nonetheless, a combination of cladding treatments, varied colour palette, signage, fenestration and loading doors all combine to reduce the perceived scale of this elevation and add visual interest. In addition, accents of blue are introduced to this elevation to reflect the corporate brand of the end-user.

Industrial development at Magna Park, Milton Keynes, where a graded cladding treatments (blue-towhite in this example) have been implemented to soften the scale and massing

9.0 APPEARANCE & MATERIALS

9.0 Summary

As noted briefly described in the Scale and Massing chapter, the elevational treatment of the building has adopted the following key factors/principles:

- Use of colours and tones to visually merge the building into the soft landscaping around the site's perimeter when viewed from open land to the north, west and east
- Careful distribution of cladding treatments to add visual interest to the facade and prevent the building appearing overly monolithic.
- Use of colours/cladding treatments to ensure the building is clearly legible to building users (delivery drivers, visitors and staff and the like).
- Introduction of corporate colours and signage towards Davy Way and Llay industrial Estate

9.1 Materials

The building will be predominantly clad with a combination of horizontally laid, metal-faced insulated cladding panels with a 'microrib' profiled finish. Vertical and horizontal trapezoidal profiled cladding is also used in part to introduce varied texture to the elevations. These materials are well-tested and highly suitable for a building of this typology, size and construction given their durability, longevity, ease of maintenance and efficiency of installation. The distribution of flat panel and trapezoidal cladding profiles add visual interest to the elevations, whilst enabling a crisp, clean overall aesthetic to the building that can be easily maintained to ensure longevity of appearance.

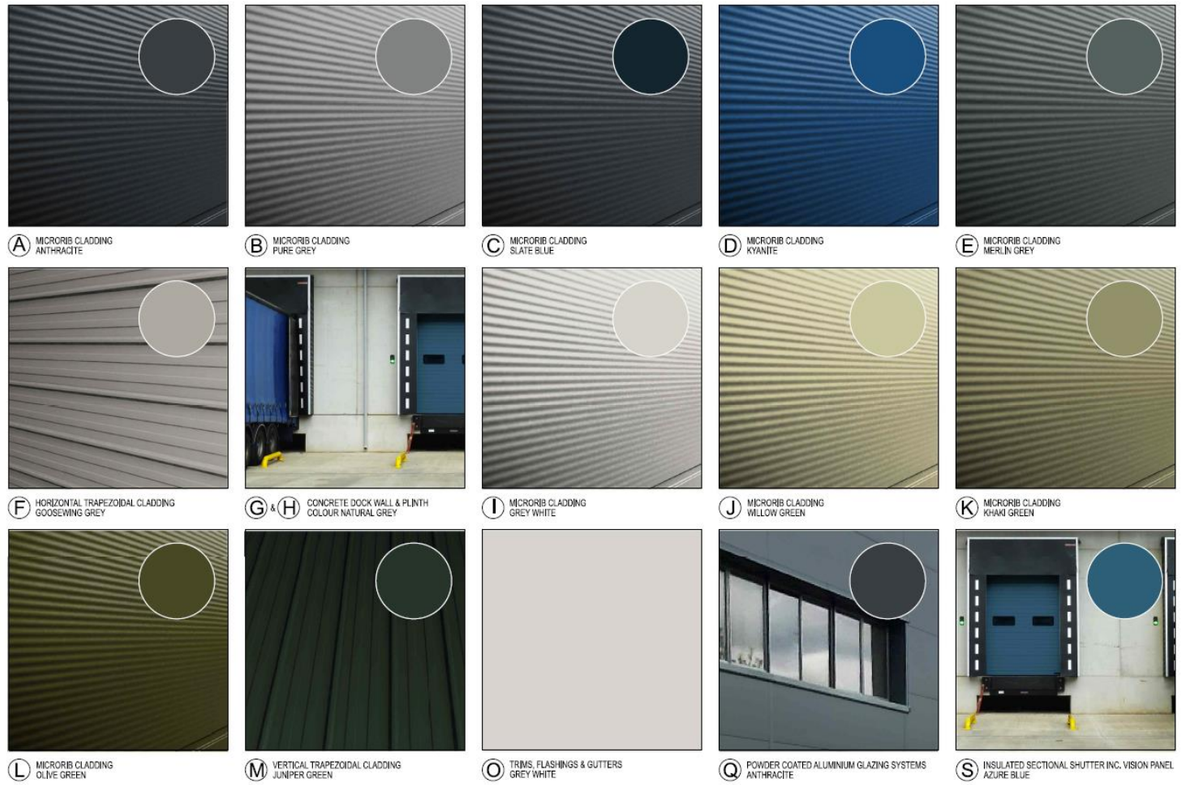


Figure 4Extract from submitted drawing 11373 PL E03 showing proposed palette of materials

9.2 Elevation Treatments – North-western, South-Western & North-Eastern Elevations

These elevations are predominantly faced with horizontally-laid cladding panels arranged in horizontal bands of green to white from base to eaves. The colour palette has been carefully selected to soften the appearance of the building and help it to visibly merge into the perimeter landscaping when viewed from afar. Utilizing a darker 'juniper' green cladding at its base, the colours gradually fade vertically, via a series of greens, to grey-white at eaves level. In addition, the horizontal-coloured bands gradually decrease in depth further up the building to further soften its appearance in a subtle manner.

This elevational approach is used entirely to the north-western elevation. To the south-western and north-eastern elevations the building partially fronts onto industrial land uses. Where this occurs the graded cladding treatment terminates with complimentary grey tones introduced to help distinguish the service and office areas of the building and visually link the graded elevations with the frontage.

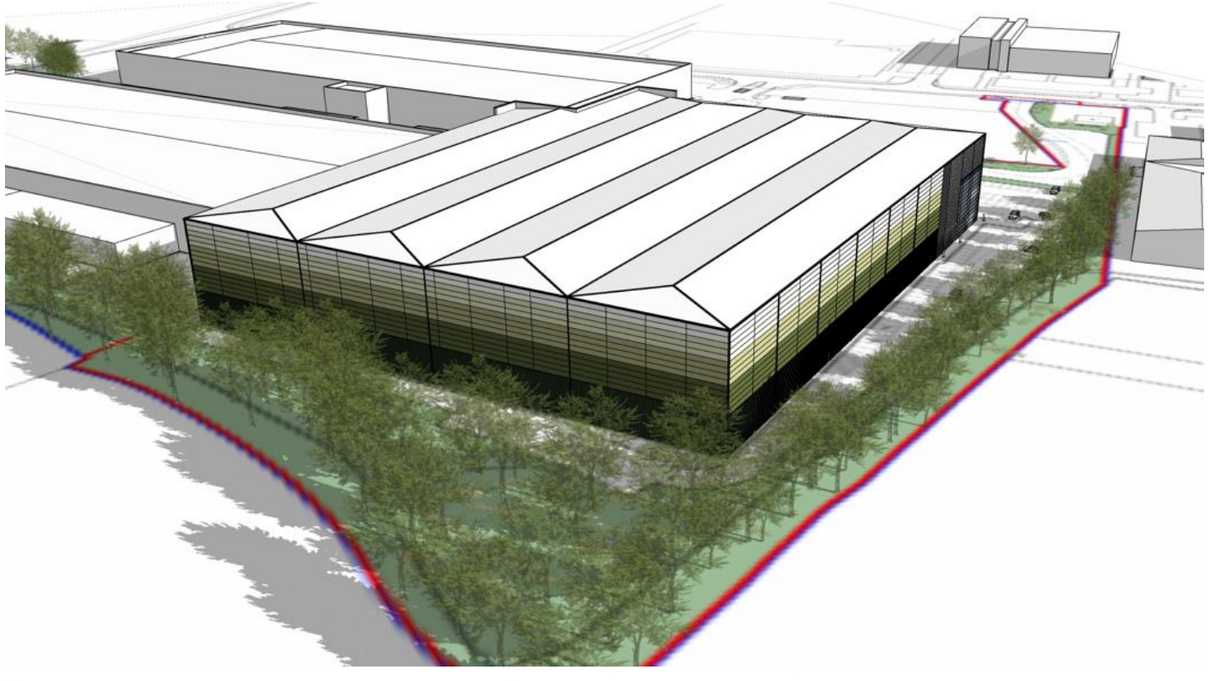
9.3 Elevation Treatments – South-Western (Entrance Elevation)

The south-western elevation includes the main entrance to the building plus all servicing points for dispatch of goes including the run of dock dock levellers. As this elevation forms active side of the building and is orientated towards the Davy Way and the wider industrial context, a contrasting elevational approach is adopted.

To define the principle building entrance on the buildings north-western corner a contrasting blue is introduced to provide a focal point and reflect the corporate identity of H-Pack. This colour is repeated across the service doors/shutters to help define the servicing element of the building in a clearly legible manner.

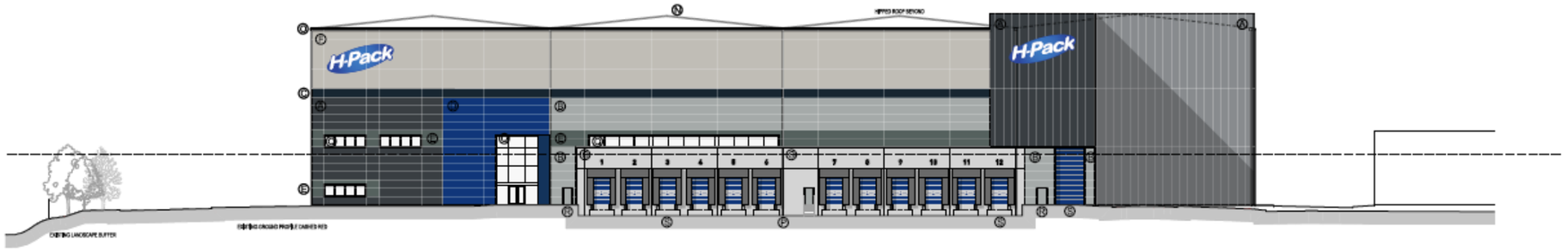
A combination of the darker grey cladding tones wraps around to frame the office element and service doors below with pre-cast concrete 'Pro Wall' utilised around the dock levellers at low level.

Where the building indents on it south-eastern corner there is no hipped roof, resulting in a localised 'step up' within the eaves line. As such, a raised parapet is used here to wrap around the building corner with vertically arranged grey cladding panels introduced to provide additional visual contrast and form a crisp parapet line local to the building corner.

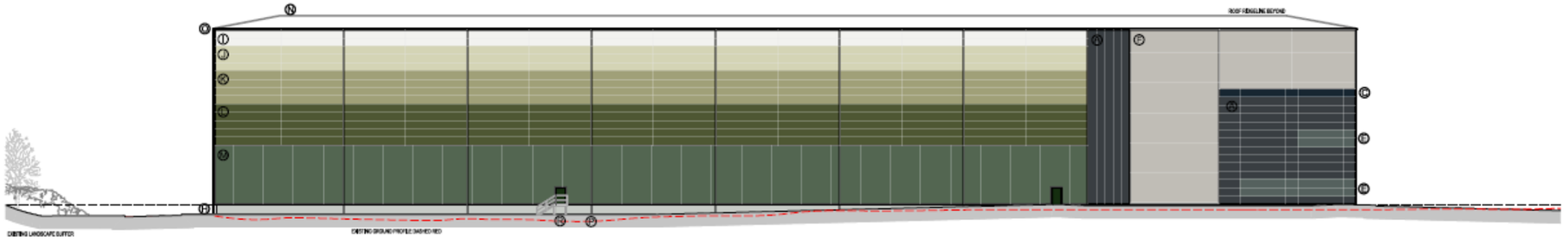


The north-western and south-western elevations utilise graded 9green-white) cladding colours to reflect the landscaped site perimeters

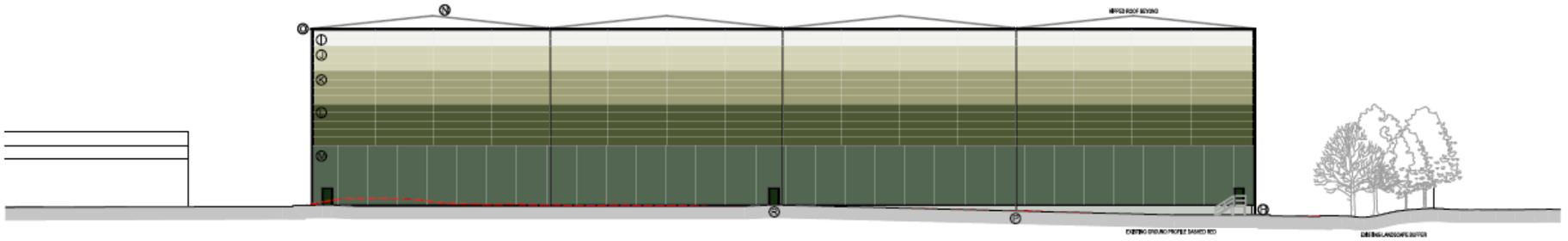
Figure 5The south-western (entrance) elevation adopts a different approach using greys and blues to visually define the access and servicing and reflect the corporate brandof the end user



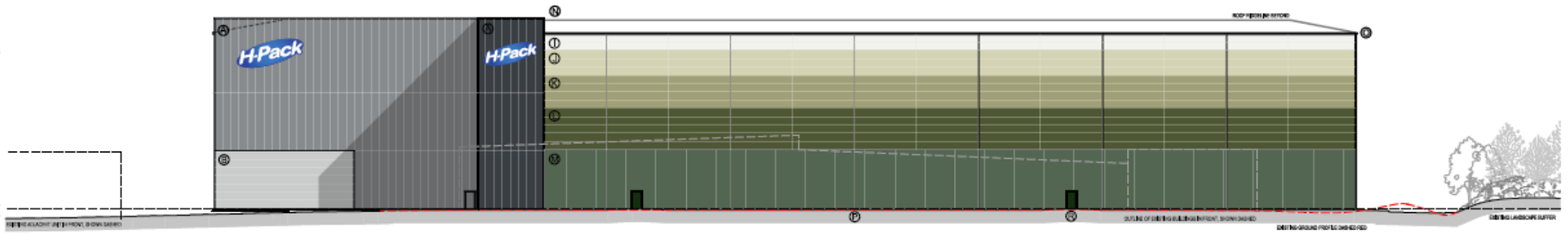
PROPOSED SOUTH EAST ELEVATION



PROPOSED SOUTH WEST ELEVATION



PROPOSED NORTH WEST ELEVATION



PROPOSED NORTH EAST ELEVATION

Extract of submitted drawing 11373 PL E01 showing proposed elevations

10.0 ACCESS

10.0 Access Principles

For the purposes of this document, the term 'access' covers both the operational servicing of the building and general movement and accessibility for staff/visitors.

Access for this development adopts an inclusive approach to design in accordance with the following documentation: -

- BS 8300 2001 – Design of buildings and approaches to meet the needs of disabled people.
- Approved document Part M Volume 2 of the Building Regulations (Access to and use of buildings Volume 2 – Building other than dwellings)
- The Equality Act 2010

This chapter should be read in conjunction with the Transport Assessment prepared by Cameron Rose, submitted with this planning application.

10.1 Vehicular Access (general)

Presently all vehicles (including HGVs and cars) access the H-Pack facility via the single vehicle entrance from Davy Way, adjacent the North Wales Police building. There is a secondary controlled access into the site from Davy Way, however this is used exclusively by Sharp.

Once within the site, all vehicles are required to circumnavigate the central grassed area to access the premises. The existing building includes cross-loading with three dock-levellers on its north-eastern corner and various dock-levellers and level access doors positioned along the building's south-eastern elevation that front onto the shared service yard with Sharp. An internal concrete service road running along the building's south-western elevation provides a link for HGVs between the front and rear of the building.

The existing staff/visitor car park is located within the north-eastern portion of the applicant's site which is accessed via an access road that skirts along the site's northern boundary.

To cater for the anticipated increase in vehicle movements, a secondary dedicated access for cars and cyclists is proposed from Rackery Lane. This will serve all H-Pack staff and visitors arriving by car, whether accessing the new or existing H-Pack buildings. All HGVs accessing or egressing the site (for both new and existing buildings) will continue to do so via Davy Way.

Formation of this additional access will enable a clear separation between HGVs and cars accessing, egressing, or manoeuvring around the site. The general vehicle movement strategy for the development can be viewed on submitted drawing 11373-PL-L09.

The existing Davy Way access is located between the substation compound and Sharp's surface level car park. As can be seen on submitted drawings, H-Pack's ownership narrows to a pinch point adjacent the north-western corner of Sharp's surface level car park. Working within these constraints, the submitted proposals have incorporated local widening of this access road to improve the provision for two-way HGV movements, including increased kerb radii to the junction to Davy Way to aid HGV movements in and out of the site. This modified arrangement has been subject to swept path analysis by Cameron Rose.

10.2 HGV Servicing Within the Site

The retained HGV access from Davy Way will be rerouted to the new service yard. As the existing premises includes docking to the north and south, HGV access to both sides of the building will be maintained via the retention of the existing internal service road that will separate H-Pack's new and existing premises.

To enable the transfer of finished goods for distribution 12 dock levellers and single level access door are access via the southern elevation are accessed via the new service yard.

Swept path analysis of HGVs has been undertaken to identify and eliminate points of conflict and ensure HGVs can adequately manoeuvre around the yard and depart the facility in a forward gear. Two-way HGV movements between the existing and proposed H-Pack buildings have also been subject to tracking analysis.

The service yard has been sized to accommodate a 25m turning circle for HGVs plus adequate manoeuvring space to access and depart the loading docks. 17m clear zone is provided for the loading docks themselves, in line with FTA guidelines. Within the service yard, areas of hardstanding are also available to accommodate ancillary uses, such as refuge compounds or external plant, should these be required.

Gradients within the circulation area of the service yard will be determined as part of further detailed design to enable the yard to adequately drain, whilst remining shallow enough to comfortably facilitate HGV turning manoeuvres (e.g., 1 in 40). The areas in front of the dock levellers will have falls of typically 1 in 20.

10.3 Vehicle Access (staff and visitors)

The new dedicated access from Rackery Lane will serve all staff and visitors arriving by car, whether accessing the existing facilities or the new building. Cars accessing the existing building will continue to use the surface level car park adjacent Rackery Lane, whereas cars accessing the new building would use the new surface level car park, accessed via the internal road that runs along the northern and western site boundaries.

The new vehicular access includes provision for a barrier-controlled access/egress for security with the barrier lines purposely set within the site to minimise the likelihood for vehicle stacking onto Rackery Lane.

To all new parking areas the following has been included:

- Standard parking bays are sized at 2.5m wide with a minimum 6m reversing space provided to all parking bays.
- Accessible bays are positioned close to the entrance and are sized in accordance with current Part M guidance.
- All external staff/visitor circulation areas will include pedestrian drop-kerbs, tactile paving and contrasting coloured paving in accordance with current Part M guidance.
- Within the building itself the stairs, lift and internal ironmongery will be designed and installed in accordance with current Part M guidance.

In addition to the above, a run of overspill parking is provided to the north of the new building..

10.4 Cycle & Pedestrian Access

Presently there is no designated footpath into the site. As such, all pedestrians and cyclists arriving at the site do so via the existing service road from Davy Way, which is shared by HGVs and cars. Given the low volume of traffic, the arrangement has proven adequate, with speed restrictions imposed for all motorists once within the site. As the proposed development will result in an increase car and HGV movements a more formalised pedestrian and cycle route has been considered from Rackery Lane.

Cyclists will be also access the site via the new vehicle entrance from Rackery Lane and access the new building via the continuous road around the northern and western site boundaries.

Covered cycle parking is strategically located near the main access in close walking distance of the main building entrance.

10.5 Fire Engine Access & Maintenance Vehicle Access

The inclusion on a vehicle route around the north and west of the new building, couple with the existing retained service road to the building's east and new service yard to the south enables unimpeded access for fire engines and maintenance vehicles to the entire perimeter of the new building. Irrespective of which vehicle entrance is used to access the site, a fire engine will be able to fully circumnavigate both buildings a break is provided between the Davy Way access road and new staff car park to enable easier fire engine access from this direction.

Similarly, a range of high-reach vehicles (e.g. cherry pickers or scissor lifts) will be able to access the full building perimeter as part of a maintenance regime for the building.

11.0 LANDSCAPE AND ECOLOGY

This document is to be read in conjunction with the Ecological Assessment prepared by TEP, landscaping proposals prepared by Randall Thorpe and Arboricultural surveys prepared by ACS Consultants, both submitted with this application

As previously described the site benefits from dense and well-established landscaped buffers along its northern and western boundaries comprising established trees of varying maturity and low-lying shrubs. These visually soften the boundaries, whilst providing excellent opportunities for biodiversity. To the northern boundary there is also grassed banking that elevate the trees above the general ground level of the development site.

In addition, there is also an established belt of trees and low-lying scrub along site's eastern boundary to Rackery Lane that front onto the highway.

As described within preceding chapters, the new building, associated roads and service yards have been configured to ensure the vast majority of the existing boundary landscaping is preserved. Where the development encroaches into the low-level shrubs and scrub, this is compensated by new inclusion of new planting zones elsewhere. To the north and west new planting is proposed to compliments the existing specimens and further promote biodiversity. To the perimeters of the new staff car park and fringes of the Davy Way access road, a more structured landscaping scheme is adopted to smarten the sites appearance and offer filtered views of the development from the south.

Along the boundary with the Sharp Car Park, there is a heavy concentration of below ground services, including HV cables, which prohibit the planting of new trees. Consequently, meadow and shrub planting are proposed to these areas.

To Rackery Lane the new vehicle entrance has been carefully configured to minimise the removal of existing trees whilst still enabling adequate two-way access for cars with appropriate kerb radii (where the road adjoins Rackery Lane) and recommended visibility splays. As detailed on the submitted landscaping scheme, compensatory tree planting is included at various locations within the application site to ensure the net balance of trees is maintained.

12.0 SECURITY AND CRIME

The creation of a secure site with good natural surveillance in which both staff and visitors feel secure is of key importance to H-Pack

As the site will operate 24-hours day, this will benefit the surrounding area by providing a additional levels of activity, presence and surveillance at all times, thus discouraging and limiting the opportunity and likelihood for crime local to the site.

Whilst many of the site's security procedures will become established once the building is operational, including CCTV surveillance systems and the allocation of security personnel, various security measures have been considered as part of the submitted proposal, which are noted below:

- Good levels of consistent illumination throughout the site via a combination of pole lighting and building-mounted lighting
- New Rackery Lane vehicular access to include provision for raised arm barrier access so that only permitted, authorised vehicles will be granted access to proposed and existing staff/visitor parking areas
- HGV entrance will have good levels of visibility from the service yard and office windows, providing a high level of natural surveillance. This will enable staff to closely monitor HGVs entering and help ensure unauthorised visitors are discouraged from accessing via Davy Way
- The proposed service areas and office area will have views into Sharp's existing surface level car park, enabling good two-way surveillance between the sites.
- Ar park areas will have good levels of external illumination that will enhance the feeling of security at all times of the days.
- Any landscaping around pedestrian or vehicle entrances to be kept low-level, thus reducing the opportunities for any trespassers who do enter the site to hide.
- A secure cycle parking is provided adjacent the entrance, which is directly visible from the service areas and principle building entrance and adjacent parking areas.
- Manually operated lockable swing gates to both vehicle access points, to enable the entire site to be secured during limited times of the year when the site is fully closed.

13.0 SUSTAINABILITY

13.0 Introduction

A multi-disciplinary approach has been adopted covering various aspects of the building's layout and design, building fabric, travel, ecology and the like.

Further detailed analysis relating to the anticipated performance of the building's energy performance is covered within the submitted LZC report prepared by Caulmert, whereas this chapter covers more general aspects of sustainability, noting how they have influenced the building's design and layout and also how sustainable measures have been considered as part of a holistic approach to both the design and construction of the building and wider site.

This is summarised under the following key headings:

- *Building & Site Layout*
- *Building Fabric and Design*
- *Fit Out Measures*

A large contributor to reducing the building's energy use will relate to the installation of mechanical systems (heating, cooling, lighting etc) to suit the building occupier's specific needs, once these become fully established. Measures to achieve this are briefly summarised under the Fit Out Measures section.

13.1 Building & Site Layout

- Developments levels have been assessed to determine an optimal building level that minimises quantities of exported and imported material required during construction
- Perimeter landscaped zones have been retained and enhanced to promote the biodiversity within the site
- Suitably specified hard landscaping to minimise damage caused by vehicle trafficking, particularly HGVs.
- Good utilisation of natural light to office areas

13.2 Building Fabric and Design

The design of the building layout and fabric will consider measures that help to reduce energy use during the building's occupancy and promote sustainable construction methods, namely:

- Careful detailing of the cladding and glazing interfaces to achieve excellent levels of air tightness.
- Locally sourced materials to be used where possible to limit transportation to site.
- Where feasible, recyclable and non-polluting materials to be specified.
- FSC sustainable timber to be used on the project where applicable.
- High reflectance values to internal surfaces within the warehouse area (walls and roof) to aid the reduction of lighting loads.
- Durable building materials with robust design lifespans to reduce the likelihood of replacement/repair during use.
- Suitable levels of thermal insulation to heated area of the building (e.g. offices) to minimise heat loss.
- Efficient structural design developed to optimise/minimise the amount of structural steelwork required within frame to achieve required clear internal spans.
- Appropriate specifications to office glazing (particularly where south facing) help manage solar gains
- Natural ventilation options to be considered to office and warehouse areas where feasible

13.3 Fit Out Measures

Carefully managed energy use is a key consideration for H-Pack. Whilst the design of electrical & mechanical/ventilation systems will be developed post determination suit their needs, consideration by H-Pack will be given to the following measures:

- Efficient heating and cooling systems.
- Implementation of appropriate building Management Systems (BMS) to closely monitor building energy use and limit wasted energy (e.g.g heating, lighting and ventilation) of unoccupied spaces.
- Use of low energy luminaires and LED luminaires were appropriate.
- Automatic daylight linked, lighting controls to all communal and circulation areas.
- Installation of water-efficient sanitary goods to staff areas.
- Roof pitches with a south-westerly with an optimal orientation for PVs if installed in the future.

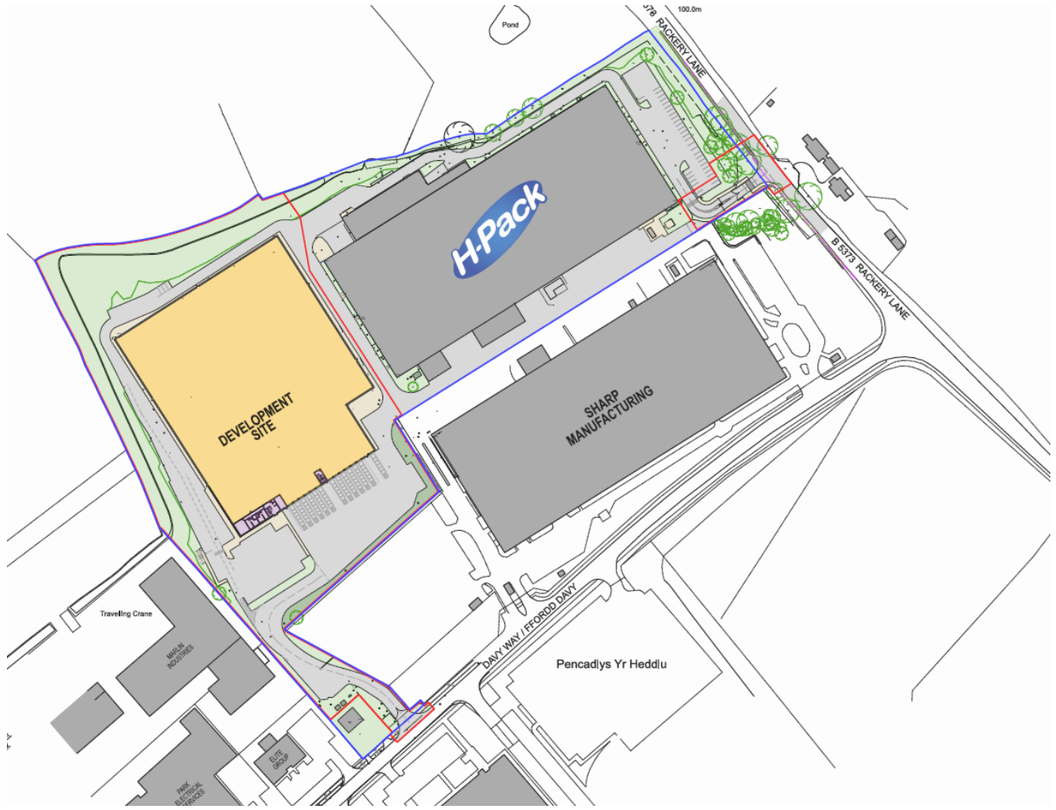
14.0 SUMMARY

Due to H-Pack's continued success and growth within the UK market, they have now reached operational capacity at the existing premises at Llay Industrial Estate. Given the site's key location, H-Pack are therefore seeking to expand operations via the construction of new high-bay warehouse facility on available land and within their current title, rather than relocate. The application site is ideally suited to this purpose as will enable excellent connectivity with their exisitng premises plus strategic links to local roads, dual carriageways and the wider motorway network.

H-Pack's existing building is primarily configured and serviced for manufacturing output and is restricted by limited clear internal head height. Consequently, the exisitng building is operationally unsuitable for large volume storage, which is badly restricting H-Pack's ability to grow. The proposals maximise the creation of secure high-bay warehouse space within the developable area of the site that will release space within their existing premises for manufacturing. This has all been achieved whilst carefully balancing the proposals with other key design considerations, such as the requirements for unimpeded vehicle movements for servicing both buildings, creation of staff parking areas and the retention of established perimeter landscaping.

Whilst located within a long-established employment area, given the building's resultant height and massing , the building's external appearance has been carefully considered to provide an attractive development with the incorporation of elevational treatments to soften the building's appearance when viewed from open land to the north and west that reflects the established, existing landscaping around the site's perimeter.

The proposals will be a positive use of a brownfield site, providing a high-quality development that will not only enable H-Pack to significantly expand their on-site operations, but also offer considerable economic benefits and employment opportunities to the area.



15.0 LIST OF SUBMITTED ARCHITECTURAL DRAWINGS

Drawing No.	Drawing Title	Scale	Size
	SITE PLANS		
11373-PL-L00	Illustrative Site Location Plan	1:25,000	A3
11373-PL-L01	Site Location Plan	1:1250	A2
11373-PL-L02	Proposed Block Plan	1:1250	A2
11373-PL-L03	Existing Site Plan (Wider Site)	1:1000	A2
11373-PL-L04	Existing Site Plan	1:500	A1
11373-PL-L05	Site Constraints Plan	1:1000	A2
11373-PL-L06	Demolition & Landscaping Removal Plan (Main Site)	1:500	A1
11373-PL-L07	Demolition & Landscaping Removal Plan (Rackery Lane)	1:200	A1
11373-PL-L08	Proposed Wider Site Plan	1:1000	A2
11373-PL-L09	Proposed Wider Site Plan Showing Vehicle Circulation	1:1000	A2
11373-PL-L10	Proposed Site Plan	1:500	A1
11373-PL-L11	Proposed Topographical Overlay Plan	1:500	A1
11373-PL-L12	Detailed Site Plan (Davy Way Access)	1:200	A1
11373-PL-L13	Detailed Site Plan (Rackery Lane Access)	1:200	A1
	FLOOR PLANS		
11373-PL-P01	Proposed Floor Plans	1:200	A0
11373-PL-P02	Proposed Roof Plan	1:200	A0
11373-PL-P03	Proposed Office Plans	1:100	A1

Drawing No.	Drawing Title	Scale	Size
	ELEVATIONS		
11373-PL-E01	Proposed Elevations	1:500	A1
11373-PL-E02	Proposed Elevations (Landscape Overlay)	1:500	A1
11373-PL-E03	Proposed Materials	1:500	A1
	SECTIONS		
11373-PL-S01	Existing & Proposed Site Sections	1:250/1:500	A1
11373-PL-S02	Indicative Building Sections	1:200	A1
	3D VIEWS		
11373-PL-V01	Proposed 3D Views (1 of 2)	NTS	A3
11373-PL-V02	Proposed 3D Views (2 of 2)	NTS	A3