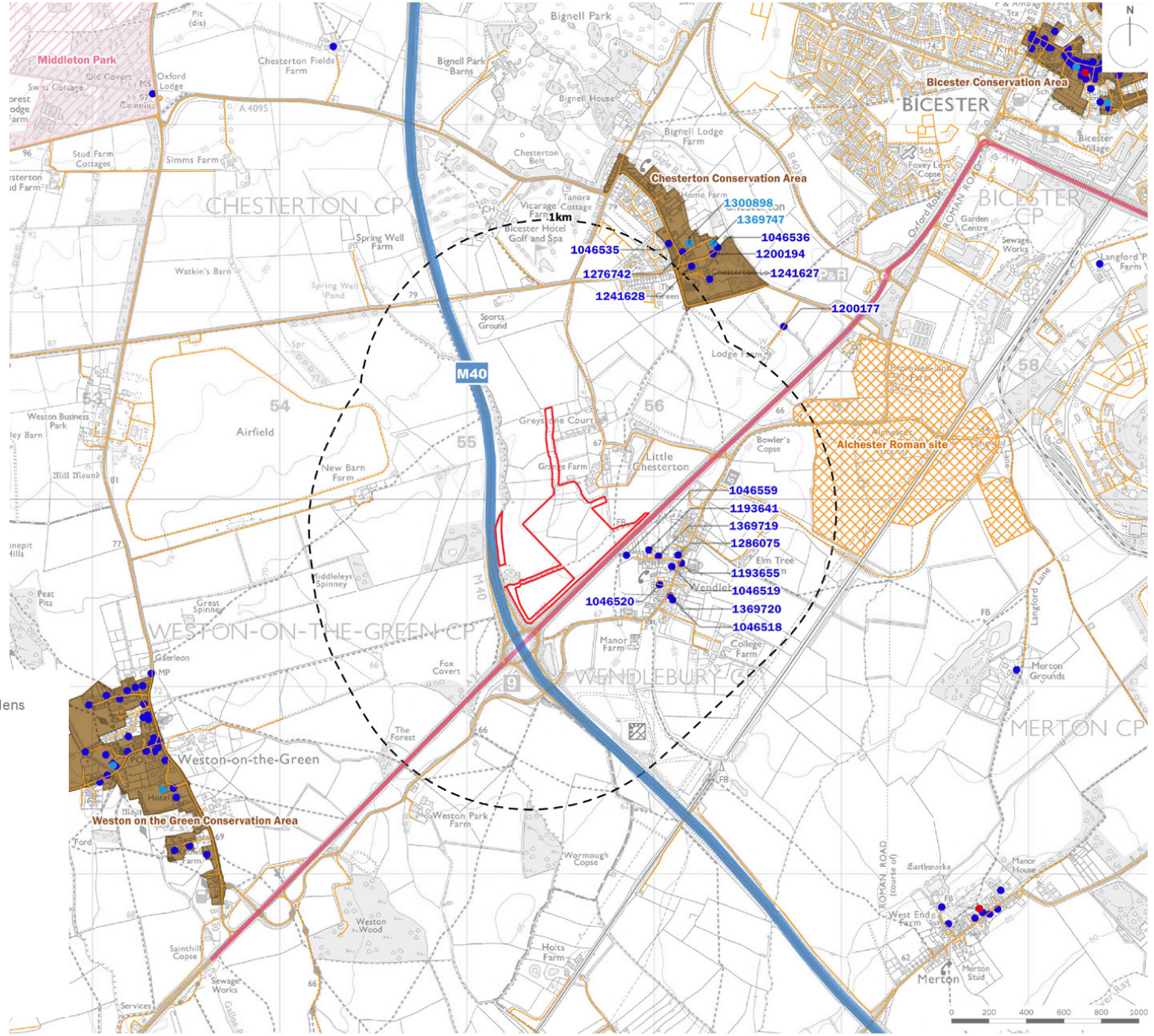
3.13 HERITAGE

There are no designated heritage assets such as world heritage sites, scheduled monuments, listed buildings, registered parks and gardens or registered battlefields, within the Site.

The presence of mature tree cover within this largely flat landscape serves to restrict views from a number of heritage designations located within 3km of the Junction, namely the Alchester Roman Site Scheduled Monument, the Kidlington Park Registered Park and Garden and the Middleton Park Registered Park and Garden.

Preliminary analysis has established that the Site does not form part of the setting of any of these heritage assets.

Further assessment has been undertaken and Heritage Assessment is an important part of the application.



MAP SHOWING THE SITE IN THE CONTEXT OF THE SURROUNDING NEARBY HERITAGE ASSETS

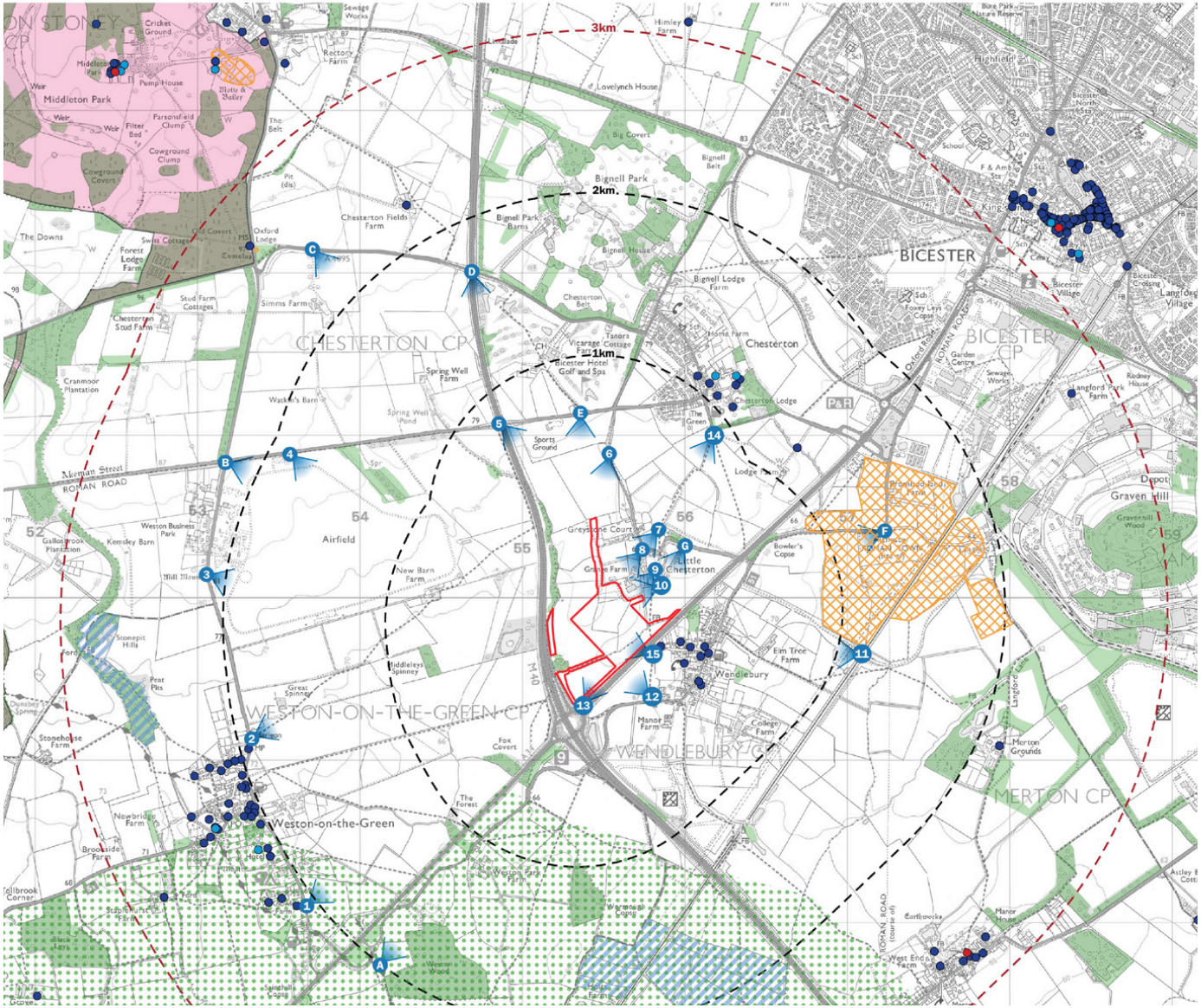
SGP

4. LANDSCAPE

A Landscape and Visual Impact Assessment accompanies the planning application.

The landscape surrounding Junction 9 is located in generally low-lying agricultural land, dissected by major vehicular corridors, each being lined with native mature tree and hedgerow cover. To the north-west of the Junction, RAF Weston-on-the-Green is markedly different in character to that of the local context. Given its use, the airfield does allow some views across the wider landscape.

The village of Little Chesterton is located within 2km of the site. However, owing to a combination of mature tree cover and the orientation of built form within and around the village, it largely turns its back on the Site being relatively well-contained.



PLAN SHOWING THE LOCATION OF THE VIEWPOINTS TAKEN WITHIN THE SURROUNDING AREA AS PART OF THE LANDSCAPE ASSESSMENT

VIEWPOINT 5 - LOOKING TOWARDS THE SITE FROM CHESTERTON

VIEWPOINT 6 - LOOKING TOWARDS THE SITE FROM LITTLE CHESTERTON

VIEWPOINT 10 - LOOKING TOWARDS THE SITE FROM OXFORD ROAD, WENDLEBURY

5. ACCESS

5.1 TRANSPORT ASSESSMENT AND FRAMEWORK TRAVEL PLAN

Following a scoping exercise with Oxfordshire County Council Highways and National Highways, a Transport Assessment has been prepared in support of the planning application. This sets out the anticipated trip generation, distribution and traffic impacts, and has been assessed within the context of other committed developments in the area. Siemens Healthineers will prepare a travel plan.

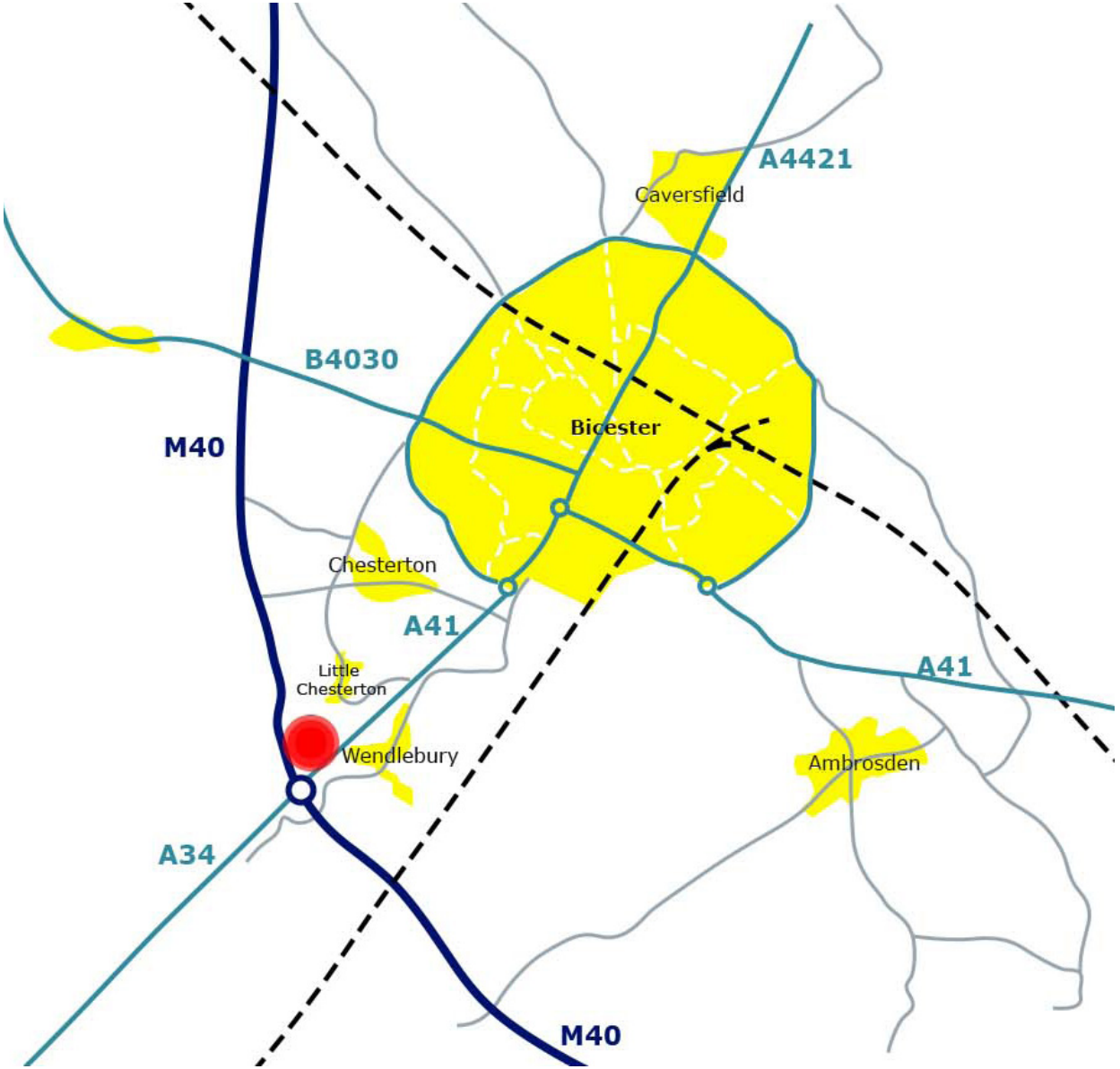
5.2 PUBLIC TRANSPORT

The existing bus stops on the A41 will be relocated and improved, with lighting, shelters and real time passenger information. As a result of the proposed signalised access junction on the A41, the bus stops will be served by high quality pedestrian crossing points replacing the existing highly dangerous arrangament.

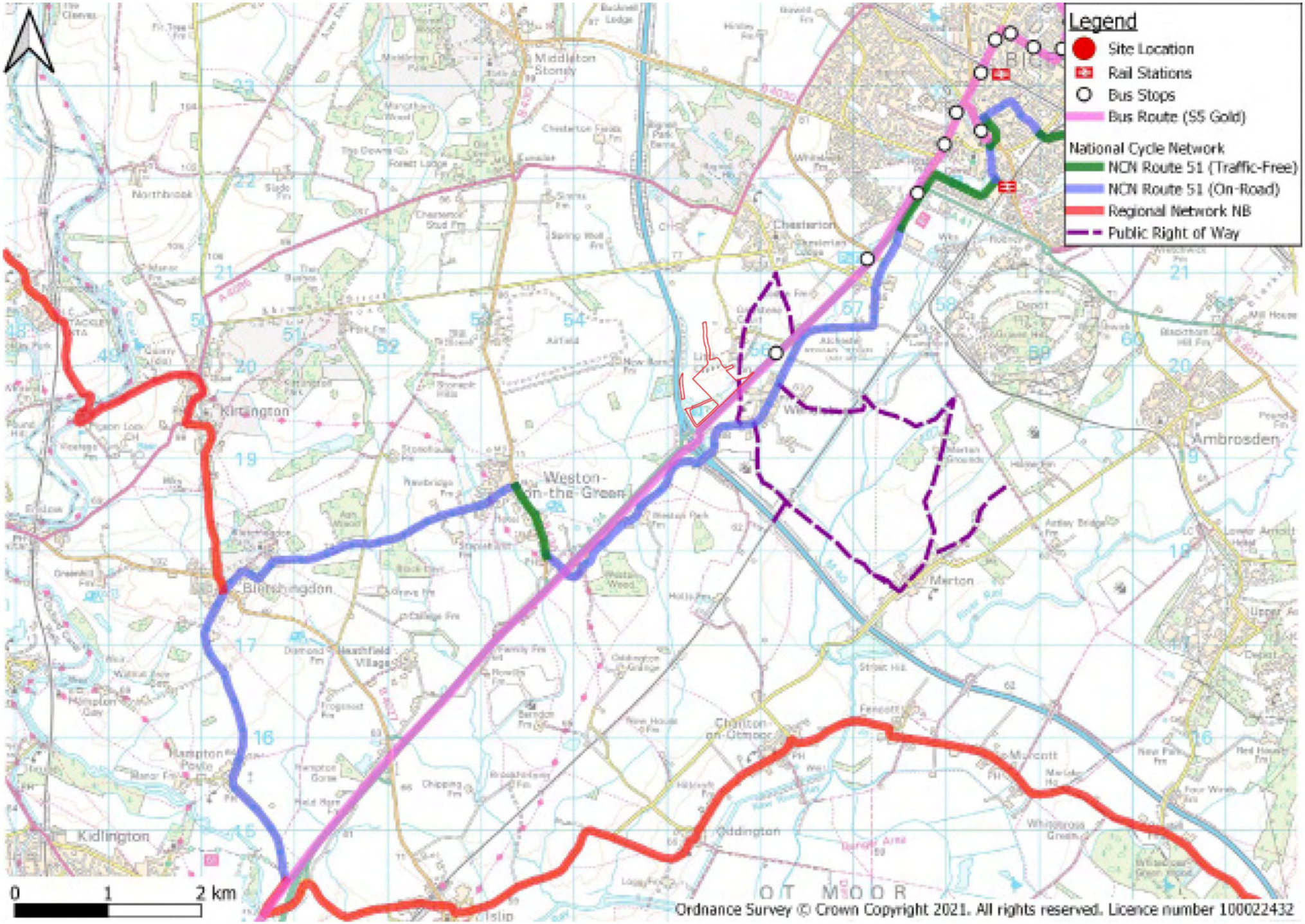
5.3 CYCLE, CAR, CAR SHARING AND HGV PARKING

The Travel Plan Co-ordinator (introduced as part of the Travel Plan) will work closely with OCC to promote lift share schemes. The TPC will also encourage staff to find car share patterns with other employees.

The TPC is to monitor the use of the staff car park and whether many staff are car sharing. If deemed appropriate going forward dedicated car share spaces could be marked in the car park to further encourage car sharing.



BICESTER CONNECTIVITY



MAP SHOWING CONNECTIONS TO PUBLIC TRANSPORT AND CYCLE ROUTES

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6. CONSTRAINTS AND OPPORTUNITIES

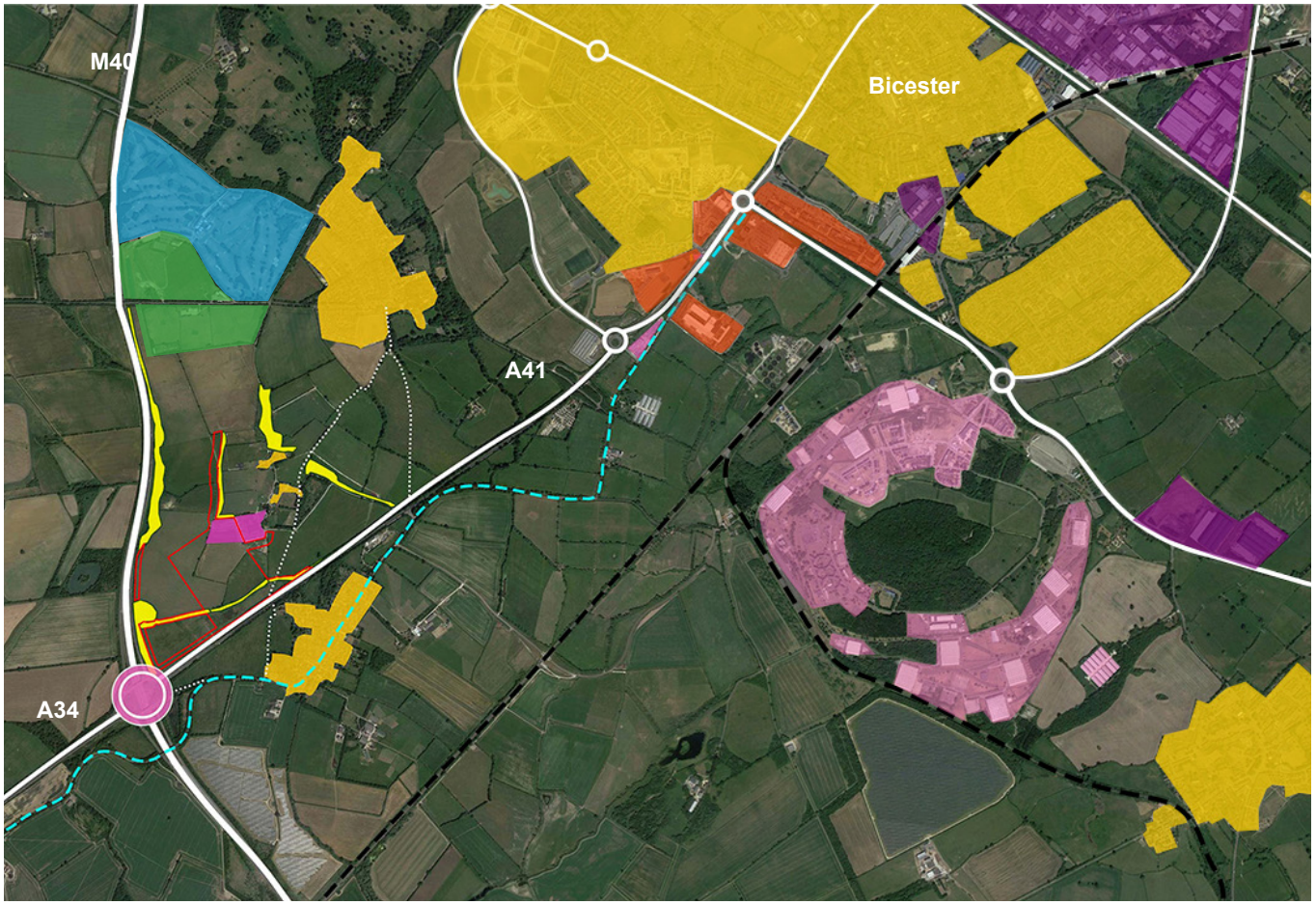
6.1 SUMMARY

Based on the Site analysis carried out by the professional team there are no major constraints to development on the Site.

As part of the detailed design process careful consideration has been given to:

- Creating a comprehensive flood management and surface water drainage strategy to maximise the development potential of the Site.
- Site levels to respond to the Site's existing topography, and to ensure that the development is efficient and flexible to suit occupier requirements and that these tie into the overall surface water drainage strategy.
- External and internal landscape treatment to minimise the impact of the development on the surrounding area in visual terms, and also to connect into wider Green Infrastructure corridor proposals.
- Integration of landscape and drainage features to create a sustainable and robust strategy that also enhances biodiversity.
- A robust and deliverable access strategy to ensure that the development does not impact on the surrounding network, and does not prejudice delivery of future highways projects.
- Building mass, form and overall height to minimise the visual impact and to ensure that the development both complements the existing context and provides the framework for the current generation of manufacturing facilities.

These key design issues have fed into the building design development which is contained in the following chapter.



Existing Residential Land Use

Existing Goverment/ Army Land Use

Junction 9 M40

Existing Employment Land Use

Existing Residential Land Use

Great Wolf resorts developments

Bicester Sports Association

Existing Trees

National Cycle Route

PROW

Rail Line

CONTEXT PLAN

7. OXFORD-CAMBRIDGE ARC

The Oxford-Cambridge Arc is a national economic priority area set by the Government and covers an area between Oxford, Milton Keynes and Cambridge. The Arc is formed of five administrative counties: Oxfordshire, Bedfordshire, Buckinghamshire, Northamptonshire and Cambridgeshire, and already support over two million jobs, adds over £110 billion to the economy every year and houses one of the fastest growing economies in England.

The Oxford-Cambridge Arc creates a transformational opportunity, that would see economic output growing by between £80.4 billion and £163 billion per annum, with between 476,500 and 1.1 million additional jobs by 2050.

The Arc has the potential to become a world-leading and globally renowned centre for business, innovation and investment in a variety of industries, including AI (Artificial Intelligence), advanced manufacturing and life sciences. Furthermore the Economic Vision for the Oxford Cambridge Arc described Oxfordshire as the 'global leader in cryogenics, with the most powerful concentration of cryogenics experts in the world'.

THE BUILDING DESIGN AND EVOLUTION

(all information in chapter 8-9.5.13 including text and diagrams is credited to Arup. The diagrams and drawings in this section are diagrammatic illustrations included to demonstrate design evolution)

7.1 VISION FOR THE NEW FACILITY

Innovation has been and will always be at the core of the SH company culture. SH employees are passionate about healthcare and are pioneers, engineers who don't walk away from a problem before it is solved. SH want to be an employer of choice for everyone who seeks to continuously learn, innovate, and contribute to shaping the future of healthcare.

The existing Oxford facility is almost unique within the SH portfolio in housing both design and production. This unlocks enormous benefits to the business readily enabling two-way communication to optimise design and production and allowing for rapid prototyping of new designs.

Furthermore, SH have a very clear vision for the workplace as being a reflection of the culture of the company and contributing greatly to the kind of employee it attracts and retains. The SH culture should be visible, tangible and create a holistic brand experience. The aim is that SH employees become brand ambassadors to customers and potential employees.

Contributing to the United Nations Sustainable Development Goals (UNSDGs) is a priority of SH business strategy and is continuously enabled by the company culture. SH have committed to all new projects being carbon neutral and to strive to an overall reduction in energy as far as practicable

The new facility must encapsulate this and:

1. Provide a physically and culturally close relationship between Design and Production to help forge an environment in which innovation can thrive.

2. Provide an operationally excellent, highly adaptable, extendable facility that is clean, efficient to run and maintain.

3. Provide an exemplar 21st Century working environment, that is attractive, well-designed, and memorable, with spaces that are inviting, friendly, spacious, and bright. The building should celebrate the SH brand and the unique manufacturing environment.

4. Facilitate the health and wellbeing of staff through a well designed and appointed working environment.

5. Be a good neighbour locally and to the planet.

The facility will be built in 2 phases. Phase 1 is:

- Clear production space for the manufacture of a new dry-magnet product, The production hall should be sized to suit SH production needs, highly efficient and readily adaptable.
- Other production including loading, workshops, welfare, staff changing and 3rd party suppliers offices.
- New R&D offices and restaurant.
- Site facilities e.g. waste, infrastructure, loading yards, roads & car parking plus landscaping.

Phase 2 will comprise production space only, which may include the manufacture of existing SH products which require external helium storage.

7.2 PROJECT DESCRIPTION

The proposed manufacturing facility consists of an eight-part operation for the production of medical equipment. The proposed facility covers a total area of approximately 56,162sq.m and consists of several distinct areas which are summarised below

a) Single storey production space, delivered in 2 phases

b) Production ancillary spaces including workshops and office areas

c) Welfare facilities

d) Hard standings for external plant and parking

e) Loading bays and service yard

f) Landscaped carparking supporting a minimum of 474 parking spaces and external recreation space

g) Waste management space

h) Security gate house

i) Facilities Management Building (FMB)

j) Energy Centre

It is proposed to construct the factory in two phases.

7.3 CONSTRUCTION PHASING

The completion of the facility will be undertaken in distinct phases as follows:

a) Phase 1: Construction of admin building, production ancillary building and production hall 1.

b) Phase 2: Construction of production hall 2. The design of the facility is to give due consideration to the phasing strategy and is to ensure the following:

- The design of the architectural and engineering systems allows for future extension with minimal disruption to the facilities operation. This is to include spatial requirements for all future installation works required as part of phase 1.
- Architectural elements including the production hall façade systems that will be impacted by the future extension of the facility are to be designed such that these can be demounted and relocated /reused as part of the future extension works, where feasible.
- The engineering systems including HVAC systems are to be scalable / modular in nature to allow future integration of additional modules. Capped off services are to be installed day one where these facilitate future extensions.

7.4 NATURE OF THE DESIGN

The design at this stage has focused on setting the architectural concept including ensuring alignment with the client's vision, requirements, building operational strategy, building massing, spatial requirements etc. from a strategic perspective.

Relationship between the architecture and core strategic engineering requirements has also been explored. Baseline strategic engineering requirements have been established and are outlined in the relevant sections of the report.

Detailed architectural design studies and engineering analysis to validate the concept design are to be undertaken by the building designers as part of future design phases.

7.5 DESIGN FOR FLEXIBILITY

The ability to adapt the building spaces to respond to changing needs is key to SH operational aspiration. This is particularly key to the production bay where service requirements may change at intervals. Architectural and engineering design solution are to be designed to facilitate this aspiration.

This will include the use of easily demountable architectural partitions within the production bay (where required). Engineering services including high level busbars distributed in a regular array to provide full coverage of the production bay will be provided. Similarly, distribution points for other services including gases will be evenly distributed across the production bay to facilitate the flexible use of the space.

Similar consideration will be given to the office spaces, with demountable partitions and flexibility in engineering services deployment being key considerations.

The Gatehouse and Energy Centre will also form part of Phase 1.

8. ARCHITECTURE

8.1 GENERAL ARRANGEMENT

8.1.1 Site Layout

The facility is positioned on the site to meet the following criteria:

- Provide a functional connection between the principle areas, for an optimised linear process route
- Provide a functional route for logistical access around the buildings within the constraints of the site boundary
- Orientate the principle elevation of the building towards the site approach
- Compose a rectilinear building form to create a well ordered appearance

For the purpose of organising the building on site, the process facility is conceived as having 3 principle areas:

1 Phase 1 Production Hall

2 Phase 2 Production Hall

3 Spine

The overall form of the facility is determined by the dimensions of these principle areas, organised to allow for optimised adjacencies.

The spine building acts as a conduit which serves the length of the production hall. From here goods loading, innovation centre, plant and personnel can serve both phases of production spaces. Goods in, is centrally located on the spine to allow for efficient distribution of materials to different stages of the production line.

A number of external buildings required to support the production process are situated to the west of the facility, away from the site approach.

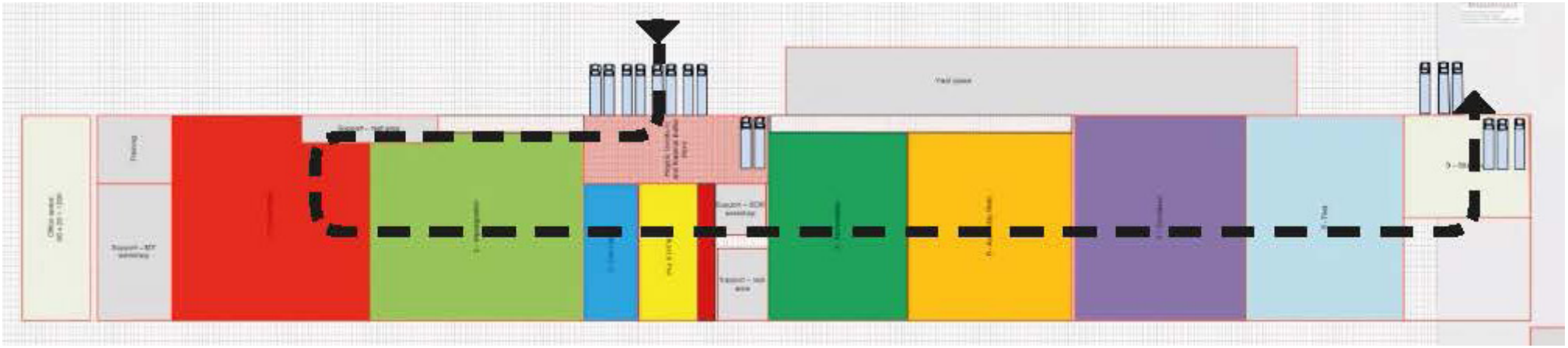


FIG. IDEAL LINEAR LAYOUT AS RECEIVED FROM SIEMENS

8.1.2 Production Line - Phase 1

Production runs east to west

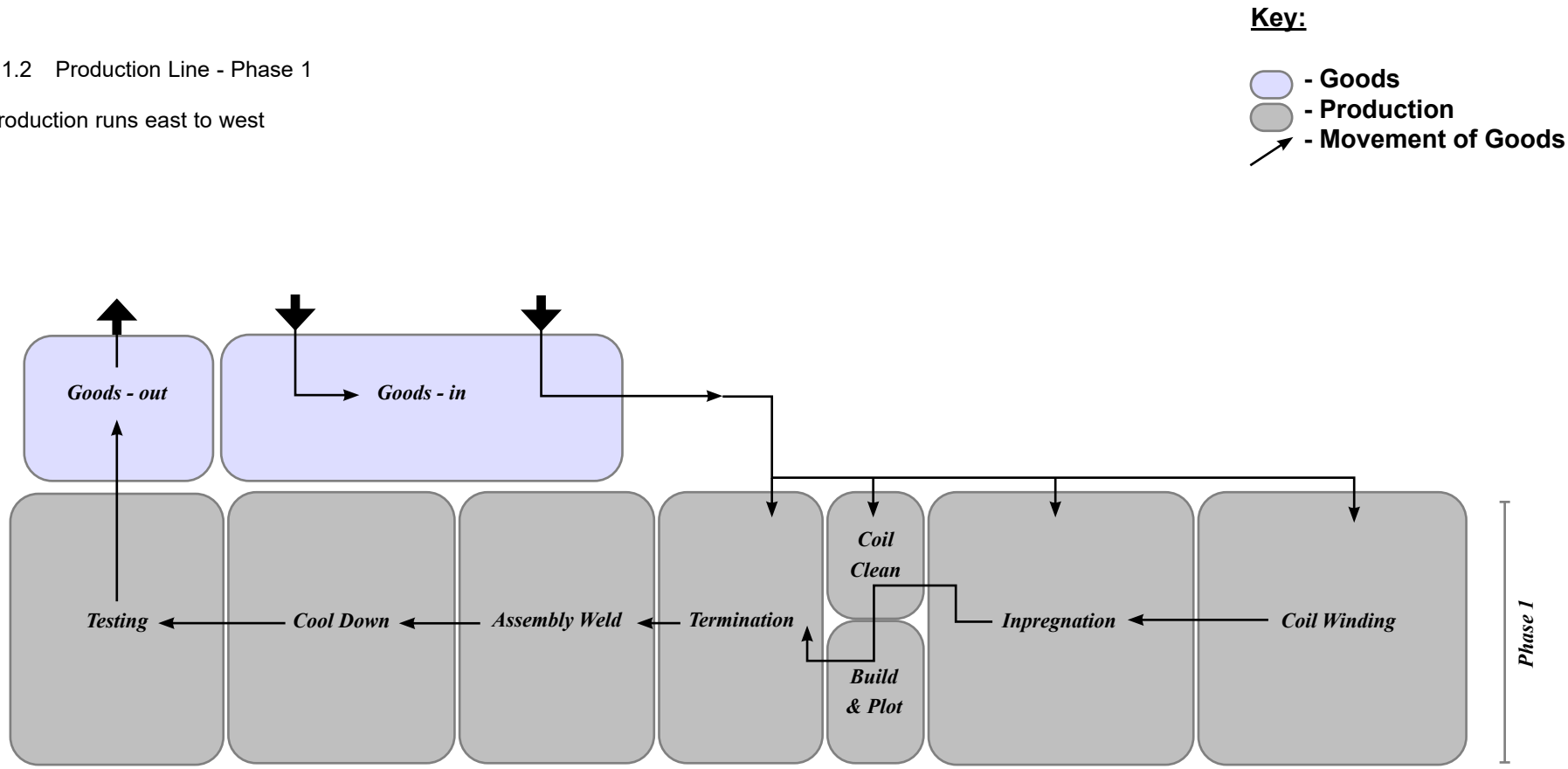


FIG.PRODUCTION LINE ADJACENCY PHASE 1

8.1.3 Production Line - Phase 1 & Phase 2

Production runs east to west

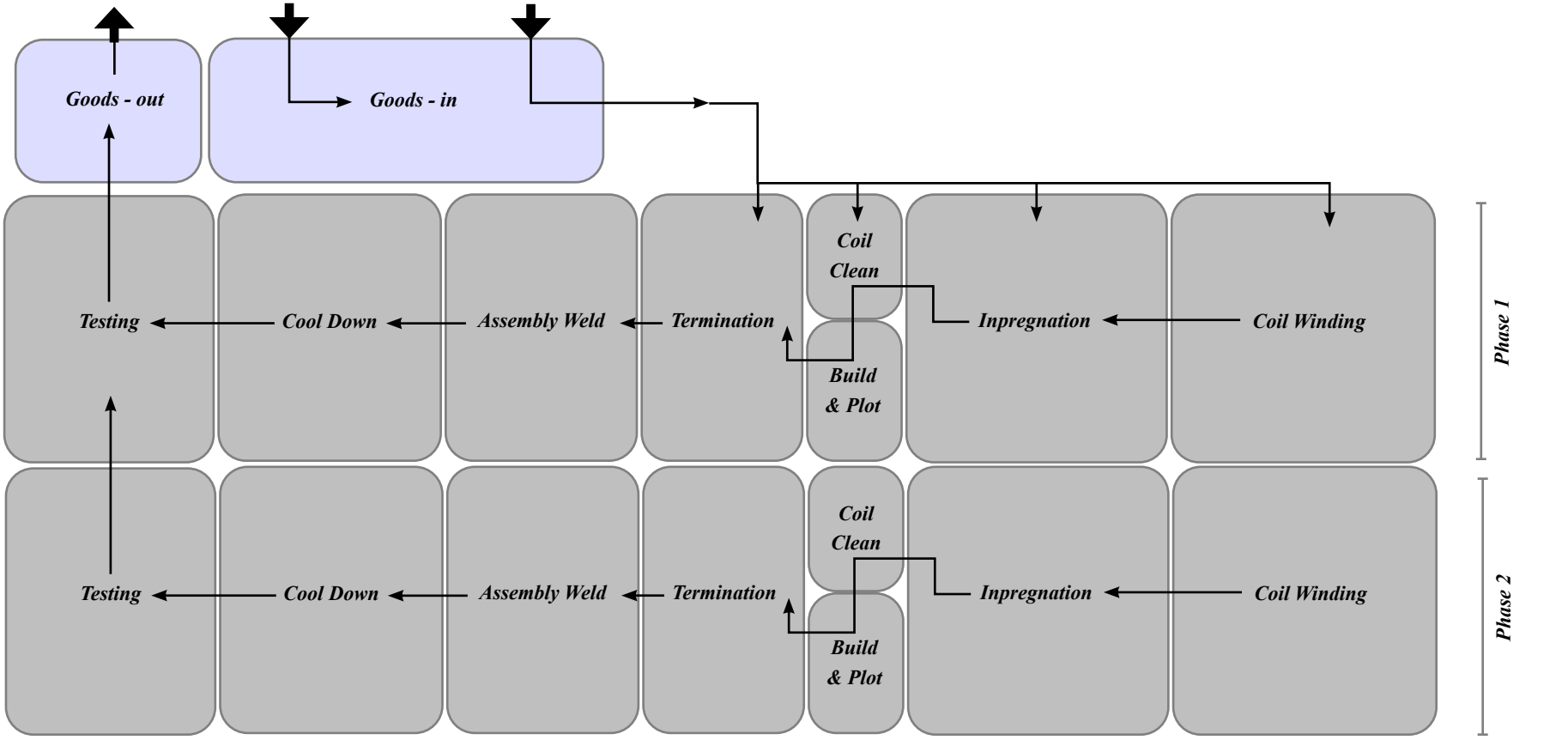


FIG.PRODUCTION LINE ADJACENCY PHASE 1&2

8.1.4 Spine

People circulate north to south

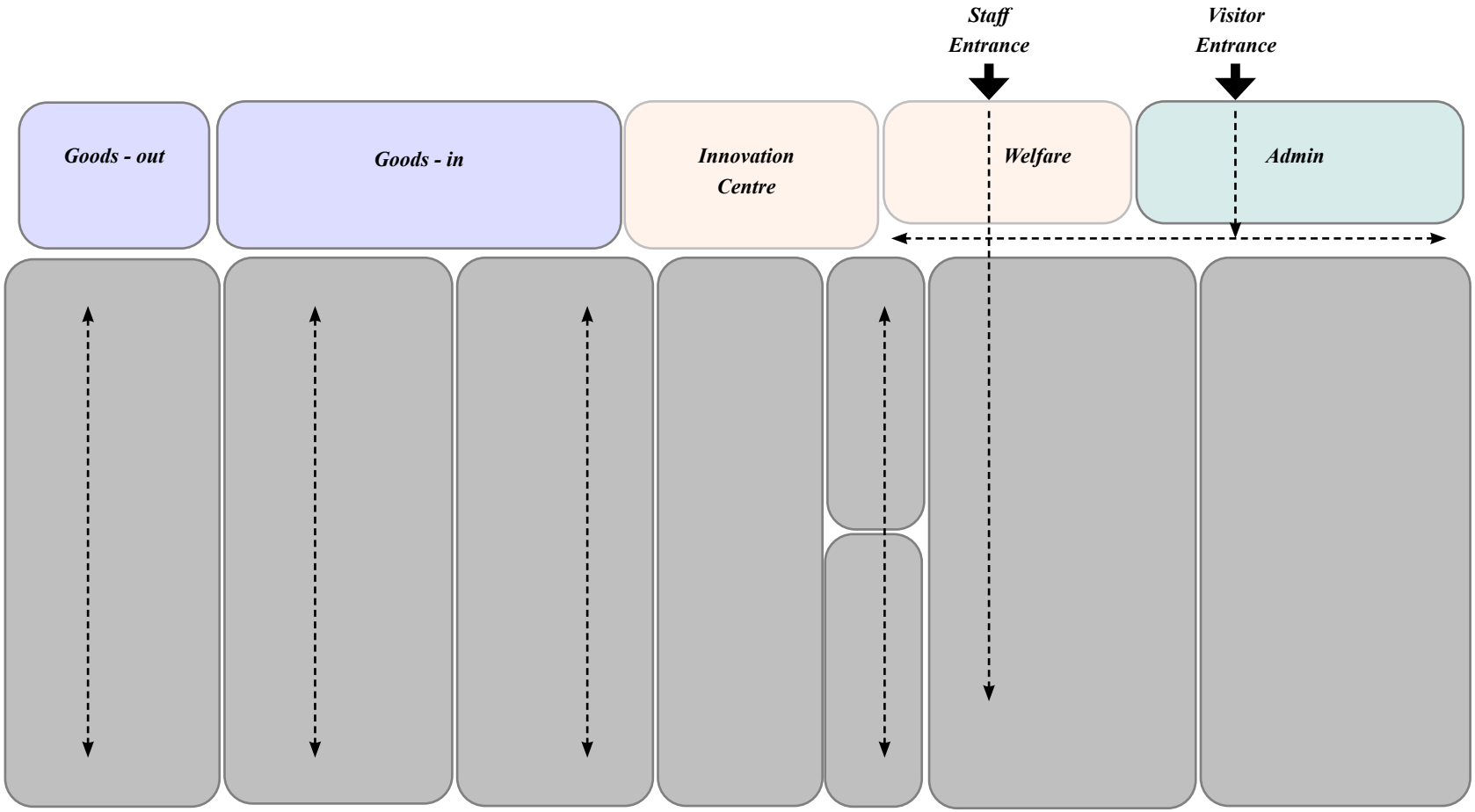


FIG.PRODUCTION LINE ADJACENCY PHASE 1&2

8.1.5 Building diagram

Production: 320m x 60m Clear span, highly flexible hi-tech manufacturing (phase 1)

Spine: 320m x 33m for offices, welfare, loading, workshops, plant etc.

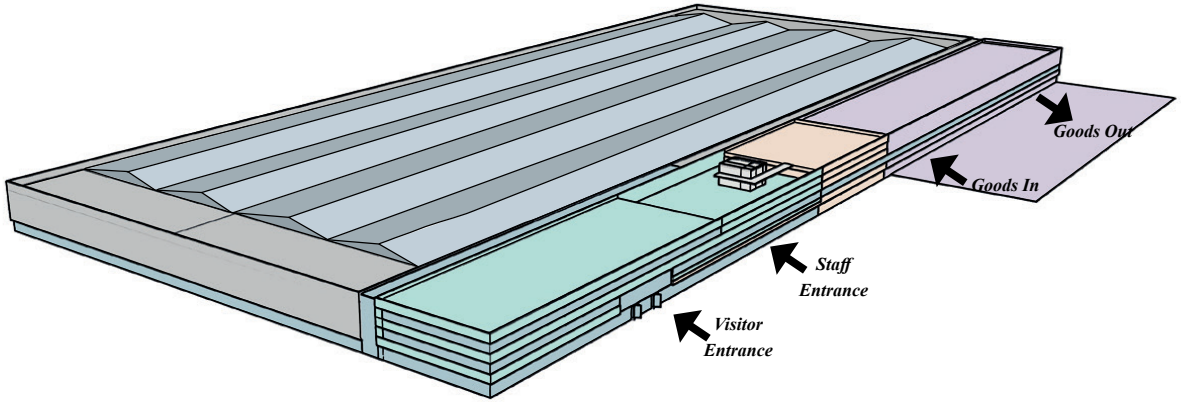


FIG. ADJACENCY DIAGRAM 3D

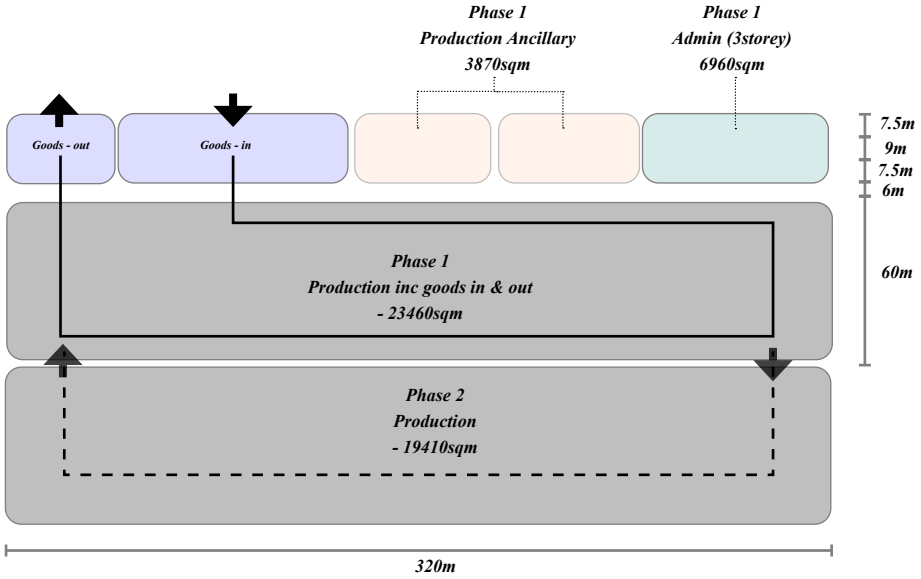


FIG. THE BUILDING DIAGRAM

8.1.6 Building Layout - Ground

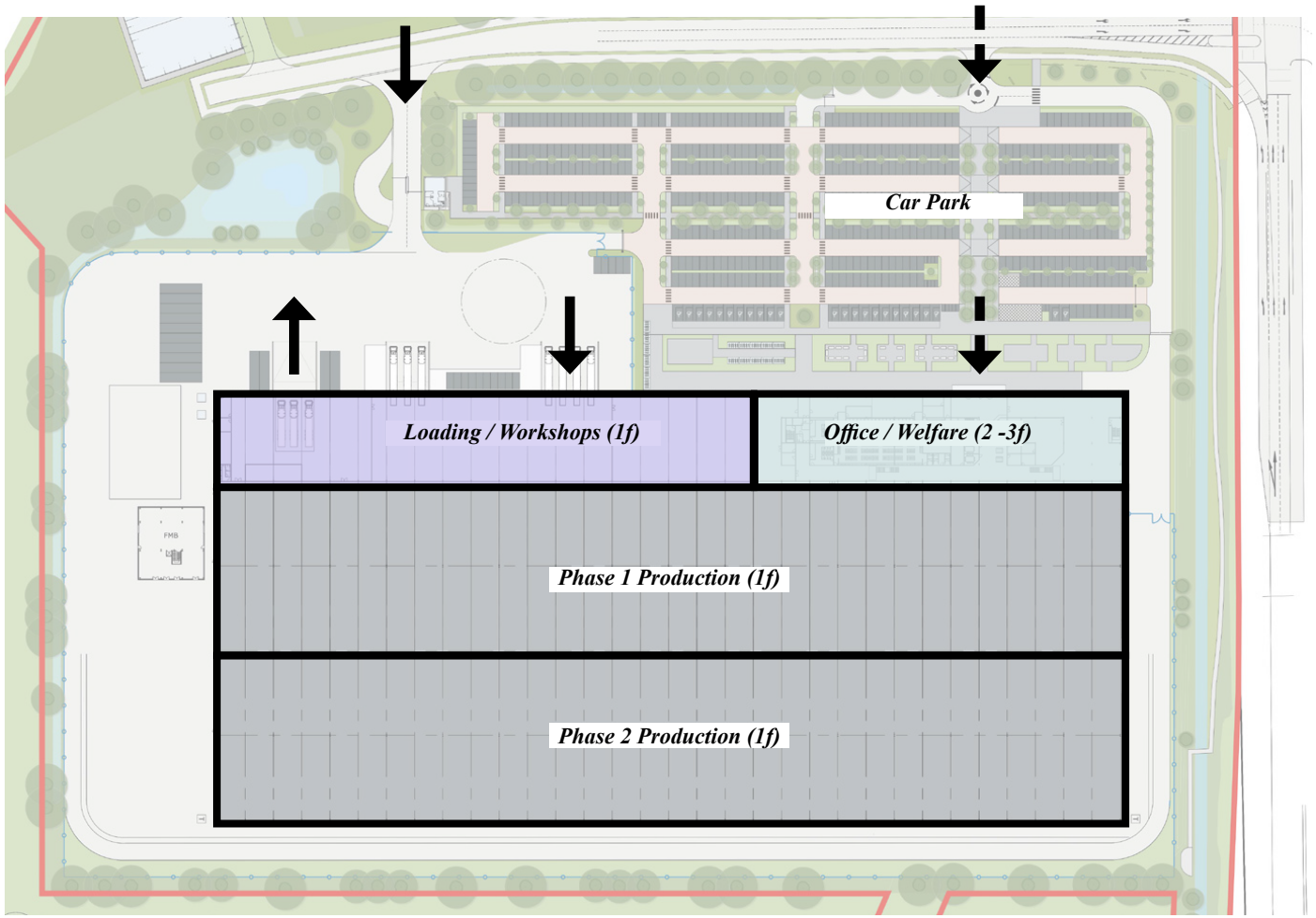


FIG. BUILDING LAYOUT GROUND

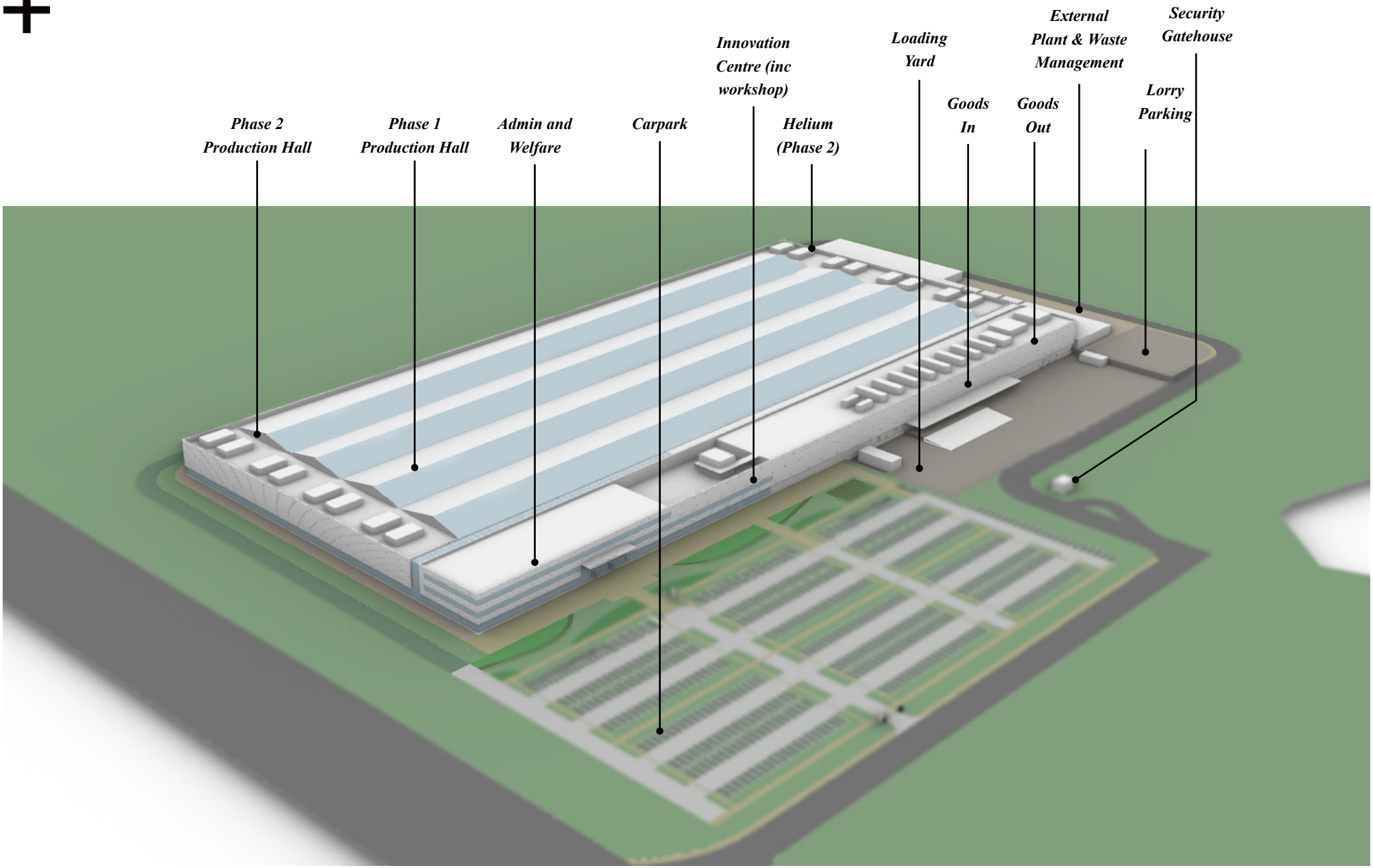


FIG. ARTISTS IMPRESSION

Key:

- Goods
- Production
- Ancillary
- Admin

8.1.7 Building Layout - Section

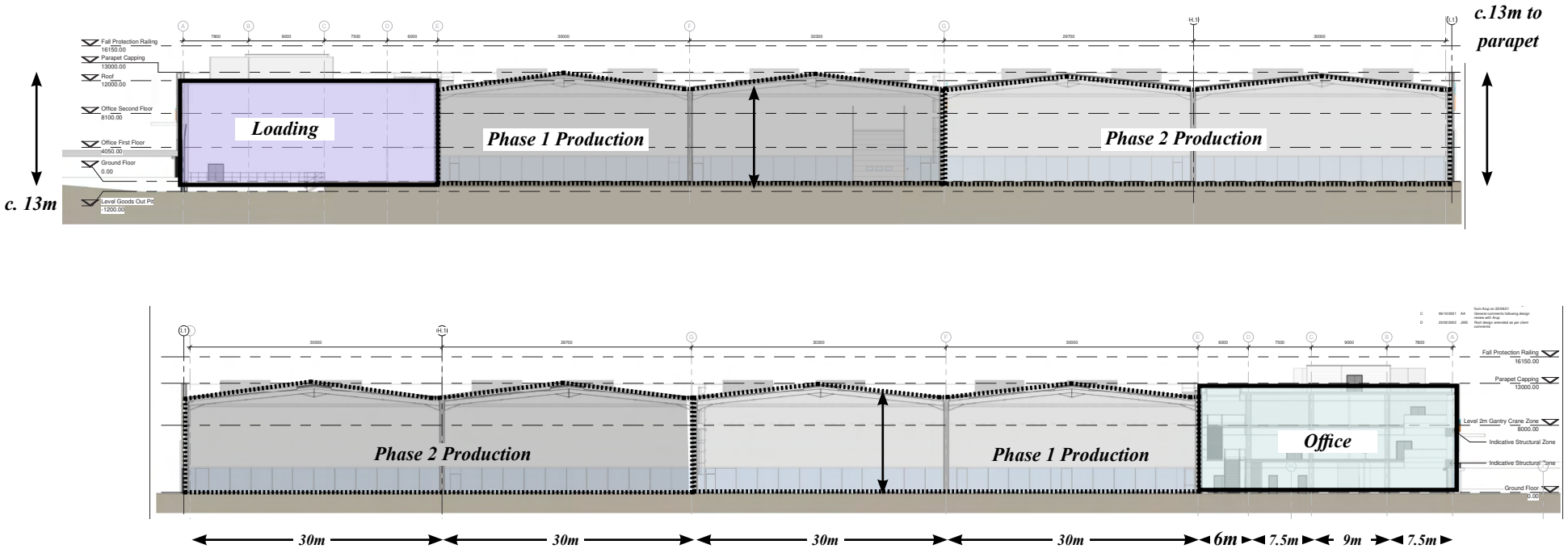


FIG. BUILDING SECTIONS

SGP

8.2 EXTERNAL SITE LAYOUT AND ACCESS

8.2.1 External Site Access

Lorry and car access to the site will be separated into a servicing yard and car park respectively.

Access to the staff car park will be provided from the southern access junction to the site. It will be subject to a barrier control system that will restrict unauthorised use. It is intended that this will be controlled using Automatic Number Plate Recognition technology, with employees being required to provide details of their vehicles.

The southern access to the site will also provide access to the visitor spaces located adjacent to the main entrance to the building. Access to the visitor parking will be achieved via a separate internal access route, which will be clearly signposted on arrival at the site access. Refuse collection will be from this access with collection vehicles passing through the barrier adjacent to the office and turning in the turning head. A Falco or similar type bin store will be provided adjacent to the refuge collection area, and canteen.

A second entrance is provided for lorries and vans, this entrance is controlled by a security gatehouse. On entering vehicles will be directed into a dedicated loading yard that directly serves the goods in and goods out facilities of the building. The loading yard level is set at a level 1.2m below FFL to allow for direct loading. Additional HGV parking is provided east of the loading yard.

To the north of the building is a service yard containing a number of external compounds with access and turning space for large vehicles.

Emergency access is required around the entire building perimeter, to the south and west this is provided by a gravel track.

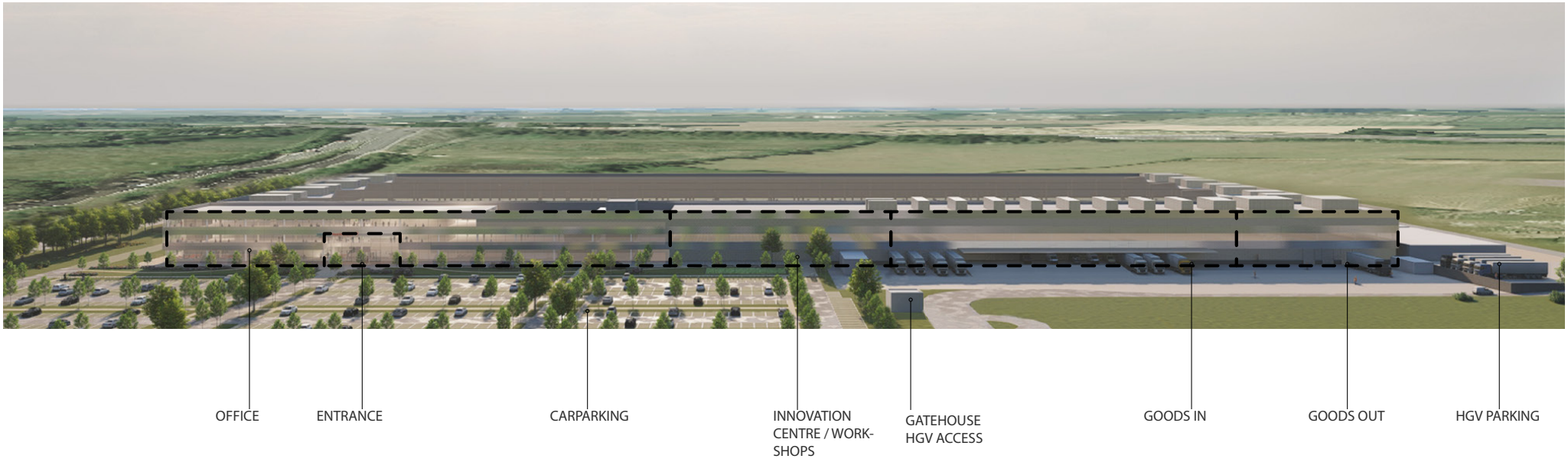


FIG.SPINE EXTERNAL VIEW - ARTIST'S IMPRESSION

8.3 BUILDING FABRIC

8.3.1 Sections

Building sections are design development diagrams, for actual final designs please refer to the application drawings'. The scale of the buildings are determined by the function of the space. Driven by the scale of the equipment and associated clear space for it to operate, services zone & structural zone.

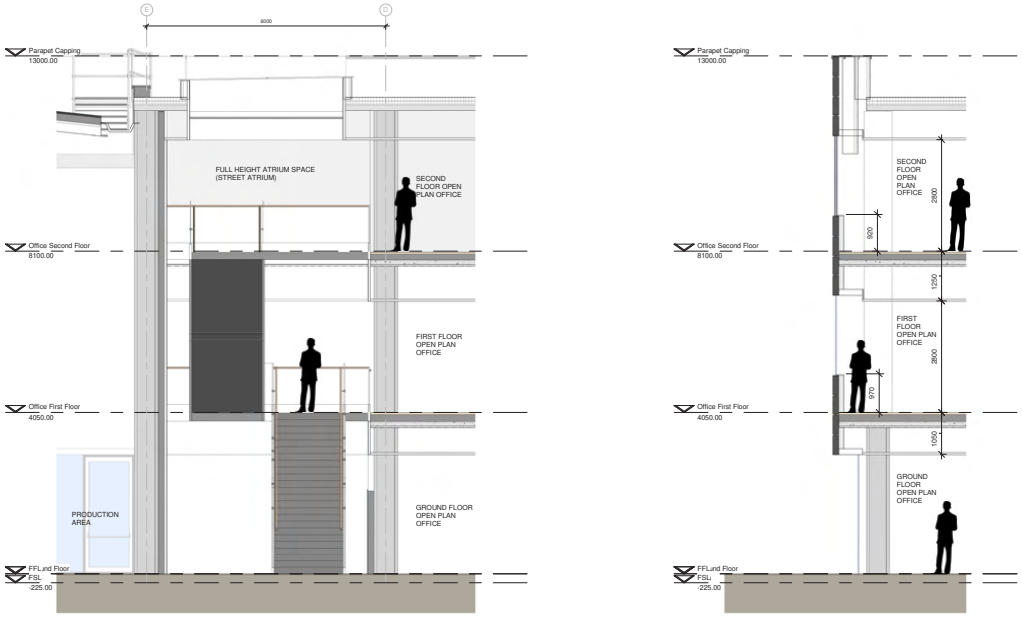


FIG. BUILDING SECTIONS

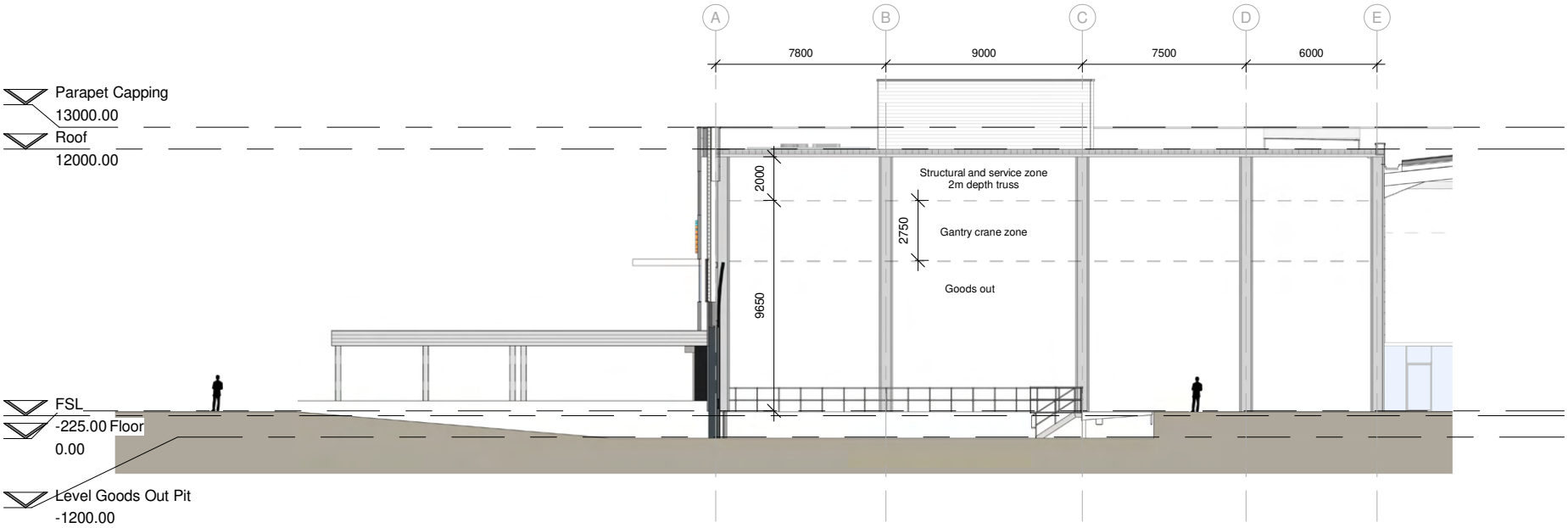


FIG. BUILDING SECTIONS

FIG. SPINE CUTAWAY SECTION

8.3.2 Facades

Across all the facades a minimalist and ordered facade is maintained. The material treatment of the façade is limited to a select palette of materials and colours. Both material choices and colour palette aim to create a uniform and coherent appearance across the whole facility.

The landscape shape of the panels across the office element paired with the horizontally laid built up cladding emphasises the horizontality of the building as a whole.

A three metre band at ground floor, the majority of which is glazed, is consistent around the entire facility when Phase 2 has been delivered. This is set back to give the illusion of a floating mass and provides the occupants with a direct connection to the exterior.

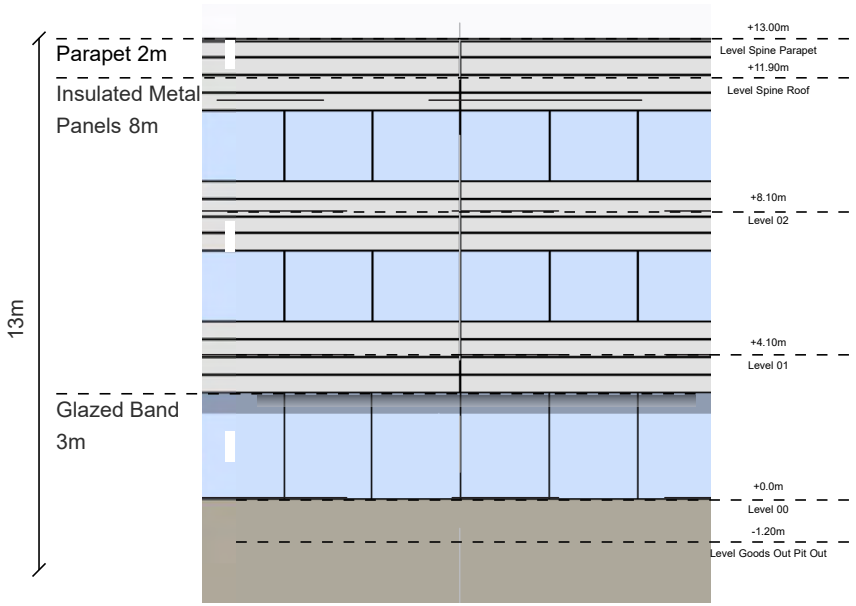


FIG. EAST ELEVATION

8.3.3 Production Building

The facade of the production building will be grey horizontally laid trapezoidal cladding, to match the colour of the office element cladding, above a three metre glazed band. This will be consistent across phase 1 & 2.

A parapet extends 1.1m above the roof pitch to conceal the plant and pitched roofline, creating a clean and ordered elevation.

FIG. ARTISTS IMPRESSION PRODUCTION BUILDING

FIG. PRECEDENT IMAGE - GLASS BASE

FIG. PRECEDENT IMAGE - HORIZONATALLY LAID GREY TRAPEZOIDAL CLADDING

8.3.4 Spine

The spine building features some two facade typologies, representative of the two sections of the building.

The height, materials and proportions are identical, however the apertures in the facade reflect the occupancy and change of use inside the building.

The goods section of the building follows the same typology as the production building, with horizontally laid trapezoidal cladding, however there is the inclusion of a glazing band at first floor level.

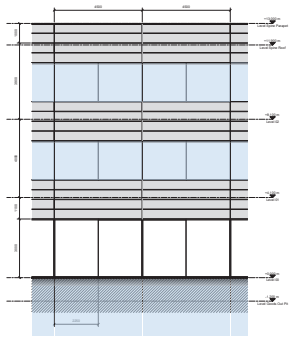


FIG. OFFICE DETAIL ELEVATION

FIG. ENTRANCE DETAIL ELEVATION

FIG. GOODS DETAIL ELEVATION

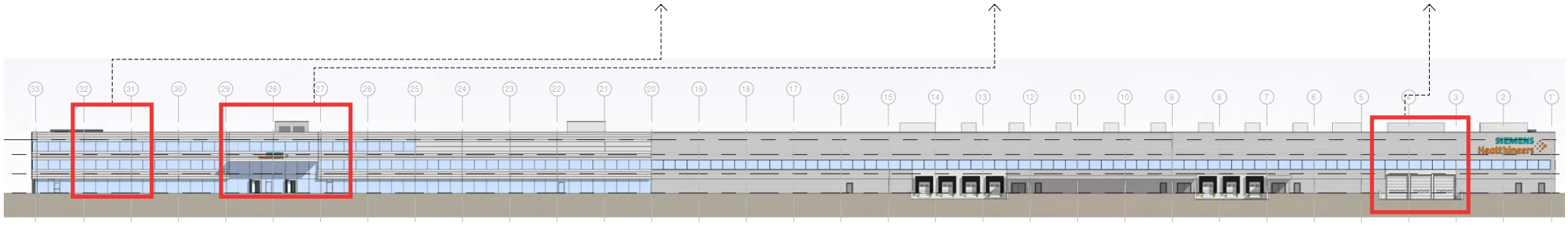


FIG. SOUTH ELEVATION

8.3.5 Office

Above the 3m glazed base, the office facade is divided into uniform 2m bands which alternate between solid metal facade and panoramic glazed windows.

The half height window approach creates a facade that is well proportioned and follows the same facade grid as the production building. The 2m glazed band reduces solar gain and creates a clean look from the exterior of the building as the spandrels are above desk level.

FIG. ARTISTS IMPRESSION - SPINE BUILDING

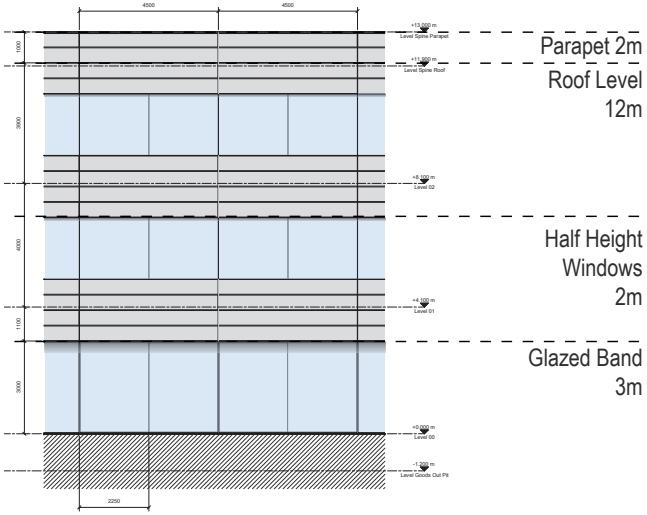


FIG. OFFICE DETAIL ELEVATION

FIG. PRECEDENT IMAGE - SIEMENS HEALTHINEERS

FIG. PRECEDENT IMAGE - GLASS BASE

8.3.6 Goods In/Out & Innovation Centre

The goods section of the spine maintains the same proportions as the office, however the material palette reverts to the horizontally laid trapezoidal cladding present in the production area.

The glazing band at first floor level is maintained to provide daylight to the goods and workshop. The band at second floor level is horizontally laid trapezoidal cladding, in the same finish to maintain the visual rhythm and horizontality of the facade. The three metre ground floor band is punctured with loading doors where required.

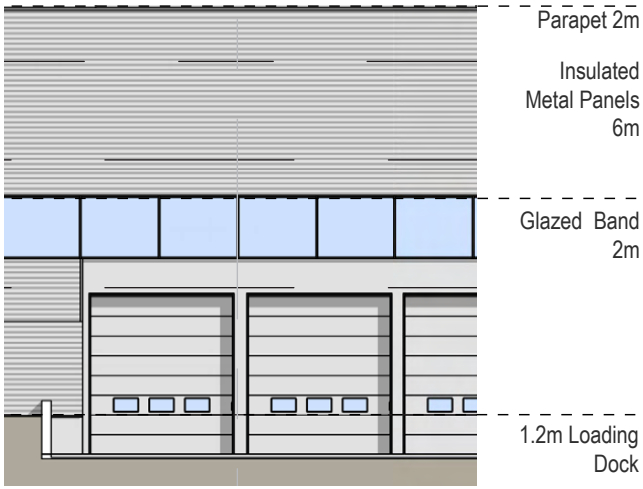


FIG. GOODS DETAIL ELEVATION

FIG. ARTISTS IMPRESSION - PRODUCTION BUILDING

FIG. PRECEDENT IMAGE - LOADING BAYS

FIG. PRECEDENT IMAGE - METAL FINISH

8.3.7 Entrance

The aspiration is to provide a HQ style front door to visitors with positive public presence.

The entrance is positioned central to the administration section of the spine building. At first floor level the spandrel breaks to allow for a two storey glazed frontage to the reception, above is a cantilevered canopy and signage.

Within, the entrance incorporates a three storey atrium opening onto a large multifunctional reception space which serves as the central hub to the building.

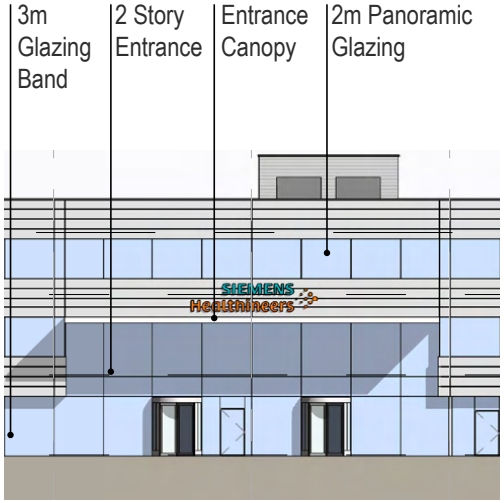


FIG. ENTRANCE DETAIL ELEVATION

FIG. ARTISTS IMPRESSION - ENTRANCE

FIG. PRECEDENT IMAGE - TRITAX MANGO BUILDING - PANORAMIC WINDOWS & FACADE PANELS

FIG. PRECEDENT IMAGE - GLASS BASE

8.3.8 Roof

The roof profile of the main facility is driven by the requirements for natural daylight into occupied areas as well as an efficient structural design and a distinctive internal environment. The proposed configurations of roof lights, running along the both faces of the pitched roof, balanced with the perimeter 3m glazing band will aim to provide a consistent quality of internal natural light.

The glazed roof of the atrium will provide daylighting to the offices as well as key communal areas such as the reception and restaurant.

The roof design aims to achieve the following:

- An efficient design, providing daylighting in occupied areas.
- Improve the wellbeing of occupants through a visual connection to the external conditions including time of day and weather.
- Maximise light to the production areas, minimising solar gains and the use of artificial light.
- Roof lights set back from the facade to maintain a continuous envelope and allow a flat zone for efficient service distribution across the facility. Roof lights to be 15% of pitched roof area.
- We seek approval for up 100% PV coverage to useable roof areas with 18% to be delivered initially.

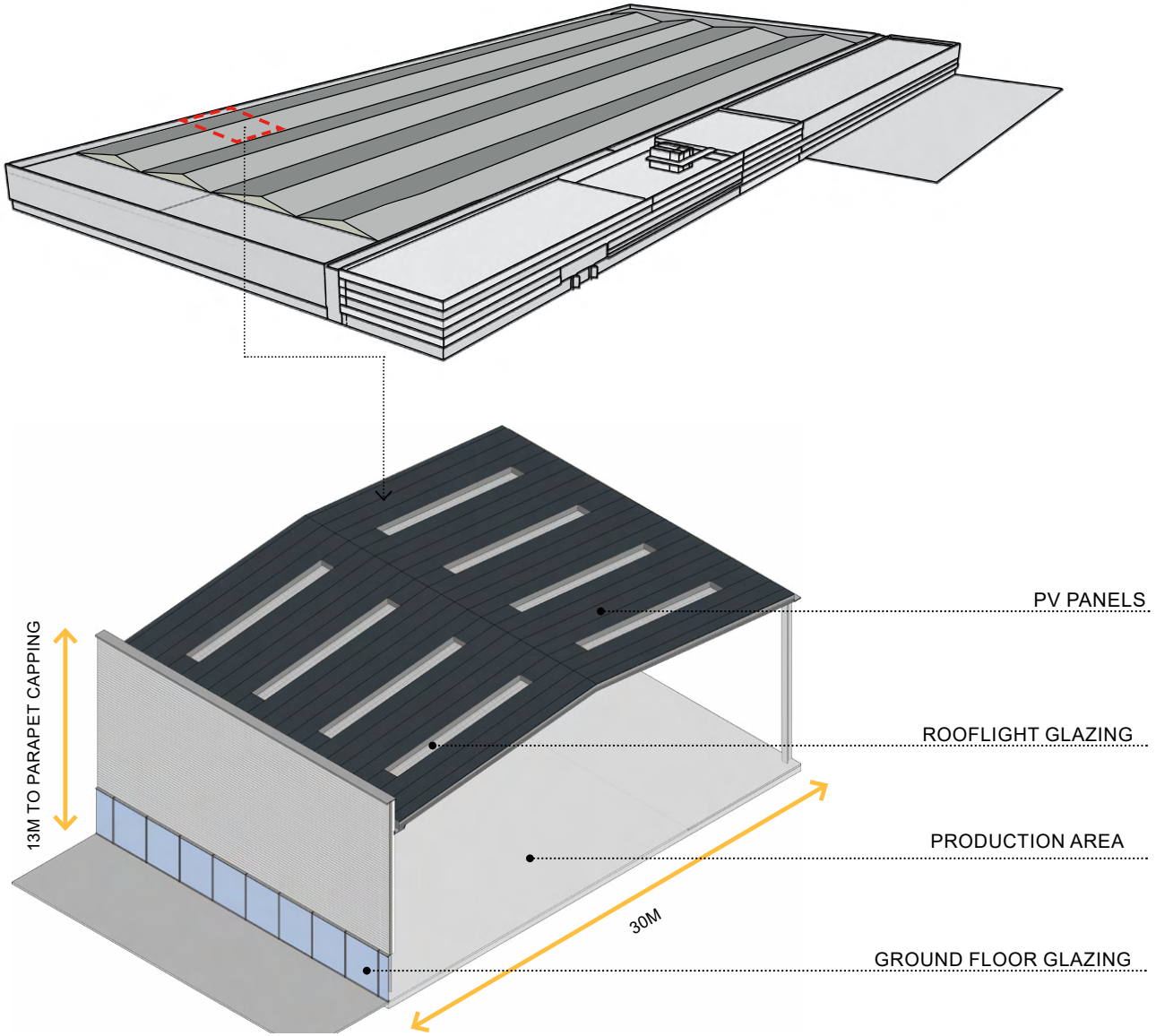


FIG. 3D SECTION