BFWEDC and NPL Group

Mott MacDonald
Ground floor
Royal Liver Building
Pier Head
Liverpool L3 1JH
United Kingdom

T +44 (0)151 482 9910
F +44 (0)151 236 2985
mottmac.com

Hillhouse Technology Enterprise Zone Masterplan

Masterplan Report

November 2018

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
V4	March 2018	HJ	DC	KR	Fourth issue
V5	October 2018	HJ	KB	DC	Final
V6	Nov 2018	HJ	KB	DC	Update following consultation

Document reference:

Information class: Standard

Contents

1 Introduction 1

1.1 Masterplan Process 2

1.2 Planning Policy Context 2

1.3 Masterplan Report Structure 3

1.4 Key Masterplan Planning Issues 3

2 Baseline 5

2.1 Introduction 5

2.2 Summaries of Baseline Topics 5

3 Vision and Objectives 8

3.1 Introduction 8

3.2 Key Considerations 8

3.3 Vision 9

3.4 Objectives 9

4 Masterplan Principles 10

4.1 Introduction 10

4.2 Key Principles 10

5 Development Areas and Land Uses 11

5.1 Introduction 11

5.2 Land Use Characteristics 11

5.3 Land Uses in the masterplan 12

5.4 Masterplan development areas 13

5.5 Land Use by Plot 17

6 Access and Movement 21

6.1 Introduction 21

6.2 Key access and movement concepts 21

6.3 Highways 23

6.4 Public transport 28

6.5 Pedestrian and cyclists 29

7 Form, Space and Massing Principles 30

7.1 Form 30

7.2 Spaces 32

8 Masterplan Character Areas 38
8.1 Introduction 38
8.2 Character Areas 39
9 Utilities 43
9.1 Utilities 43
9.2 Summary 44
10 Phasing 46
10.1 Overall Phasing 46
10.2 Highways Phasing 47
10.3 Utilities Phasing 48
11 Further Work and Next Steps 50
11.1 Northern Access Road 50
11.2 Utilities 50
11.3 Detailed Surveys 51
11.4 Five-year review 52
11.5 Funding 53

1 Introduction

Hillhouse International became an Enterprise Zone (EZ) in 2016, designated by Central Government, with the ambition of growing employment on the site from the current 1,650 jobs to over 3,000 by 2035. Historically, the site was an Imperial Chemical Industries (ICI) production plant, and has been a leading site for chemical production in the UK since World War 2. The Enterprise Zone is composed of two parts – a large secure access area, and an open access area.

The annotated aerial photograph below illustrates the location of Hillhouse International within Thornton, located to the south east of the town of Fleetwood and on the western banks of the River Wyre Estuary.

Source: Hillhouse Technology Enterprise Zone Marketing Brochure, 2018

Government financial incentives, in the form of Business Rates Relief and Enhanced Capital Allowances, are available at the site for businesses which invest in expanding their business. The secure access area is home to three large occupiers plus approximately 35 smaller and medium enterprises, part of this area also has full COMAH status. The chemical and energy production uses of the Hillhouse International Enterprise Zone are its defining characteristic and will be the core activity of the site in coming years, and consequently will be key sectors for employment growth.

The Lancashire Advanced Manufacturing and Energy Cluster (LAMEC) includes Samlesbury, Warton, Blackpool Airport and Hillhouse International Enterprise Zone sites, which combine to provide a compelling offer to investors and occupiers in globally competitive sectors critical to

the economic success of the North of England and the Country as a whole. The Cluster has the potential to generate 10,000 new high value jobs over its lifetime and ensure Lancashire builds on its position as one of the UK's leading centres of excellence in advanced manufacturing and energy.

1.1 Masterplan Process

Blackpool, Fylde and Wyre Economic Development Company and NPL Group, as the primary owner of the site, jointly commissioned Mott MacDonald, in partnership with multi-disciplinary partners, to develop a masterplan covering the 25-year lifespan of the Enterprise Zone. Wyre Council will undertake updates to the masterplan in-house every 5 years to ensure the masterplan remains 'live' and reflects the needs of the stakeholders.

The masterplan presented in this document has been through numerous iterations and subject to a three week public consultation. Consultation comments received during this consultation have informed the preparation of this final masterplan. The masterplan will serve as the visionary document and framework which guides development in the Hillhouse International Enterprise Zone. However, the masterplan will continue to evolve through periodic reviews at approximately five-year intervals to ensure the masterplan remains an applicable framework for development in the Enterprise Zone.

The new Local Plan will give the masterplan the flexibility to guide the type and timing of development of individual plots within the Enterprise Zone. The overall planning strategy will therefore be for individual planning applications to bring forward development on specific plots in accordance with the framework set out in the Masterplan and in accordance with relevant development management policies in the adopted Development Plan.

The proposed phasing and uses for individual plots in the masterplan are indicative and any development proposals approved between the masterplan being adopted and subsequent reviews will be reflected in subsequent iterations of the masterplan.

1.2 Planning Policy Context

The current Development Plan for the Hillhouse International Enterprise Zone comprises:

- Saved policies of the Wyre Borough Local Plan (1999);
- Fleetwood - Thornton Area Action Plan (AAP) (2009);
- Joint Lancashire Minerals and Waste Development Framework Core Strategy DPD (2009); and
- Joint Lancashire Minerals and Waste Local Plan Site Allocation and Development Management Policies (2013).

Where specific allocations made in the Local Plan are in conflict with proposals in the AAP, allocations in the AAP will take precedence. The AAP allocates the Hillhouse secure site for industry and business purposes under Policy 3 and Wyre Borough Council is currently preparing a new Local Plan which will replace the AAP and the saved policies of the Local Plan. The new Local Plan is at an advanced stage of preparation having been submitted to the Secretary of State in January 2018. Hearing sessions as part of an Examination in Public (EiP) took place between 15 May and 5 June 2018. The Council has now published its schedule of proposed Main Modifications following receipt of the Inspectors Post Hearing Advice and these are being consulted on between 12 September and 24 October 2018. It is anticipated that the new Local Plan will be adopted in early 2019.

The new Local Plan allocates the entire Hillhouse International Enterprise Zone for mixed-use development under Policy SA4 which requires the site to deliver:

- 250 dwellings; and
- At least 13 hectares of employment development within use classes B1, B2 and B8.

Other complementary commercial uses including an element of small convenience (A1 retail store) of not more than 400m^2 to support the residential and employment development would also be acceptable.

Policy SA4 requires the entire Enterprise Zone to be brought forward in line with a masterplan covering the whole of the designated area and the masterplan must be agreed by the Council prior to the granting of planning permission for any part of the Enterprise Zone.

At its Cabinet meeting on 5th September 2018, Wyre Council adopted its 'Guidance on the Preparation of Masterplans' to assist landowners/developers and stakeholders in preparing masterplans where this is required by the Wyre Local Plan.

Given that the preparation of the masterplan for the Hillhouse Enterprise Zone commenced some time ago and prior to the adoption of this guidance, it has been agreed in discussions with the Council that the masterplan should be progressed in its current form. However, future iterations of the masterplan will need to accord with the masterplan guidance.

1.3 Masterplan Report Structure

Following the baseline assessment, consultation with relevant stakeholders and further feasibility assessments, the initial layouts and land use options presented in the baseline report have been through an iterative process of concept and framework design to culminate in a proposed masterplan.

The masterplan is framed around the existing energy and chemical related industries, with the development and creation of a place that is focused around industry and business.

This report contains the following sections:

- Section 2: a recap of the main findings of the baseline report
- Section 3: the visions and objectives for Hillhouse
- Section 4: principles of the masterplan
- Section 5: development areas and land uses
- Section 6: access and movement strategy
- Section 7: form, space and design principles
- Section 8: character areas
- Section 9: utilities considerations
- Section 10: phasing
- Section 11: further work and next steps

1.4 Key Masterplan Planning Issues

Third party funding needs to be sourced to enable the following:

- A landscape and green infrastructure framework incorporating structured tree planting, and pedestrian and cycle connectivity within and where possible outside the site

- A project level Habitat Regulation Assessment (HRA) for the entire Enterprise Zone (having regard to the mitigation measures in the Habitats Regulations Assessment of the Local Plan)
- A Flood Risk Assessment (FRA) for the entire Enterprise Zone must be carried out as planning applications begin to come forward, and the results used to take a sequential approach to overall site layout
- Residual surface water run-off should drain direct to the river Wyre via Springfield in the north and Royles Brook in the south. This will require a masterplan-wide drainage strategy
- Springfield and Royles Brook are both designated Main Rivers. The prior written consent of the Environment Agency is required for any proposed works or structures in, under, over or within 8 metres of the top of the bank of the watercourse and 16 metres of the estuary flood defences. An open space buffer should be provided to protect the watercourse from detrimental impacts.
- A ground and water contamination desk study will be required and followed, if necessary, by more detailed site investigation.

If such third party funding cannot be secured, the above will be sourced on a development led basis.

2 Baseline

2.1 Introduction

The first stage in developing the Hillhouse International Enterprise Zone masterplan was to conduct an assessment of the baseline conditions at the site. Assessment was conducted in relation to the following disciplines:

- Urban realm
- Access and movement
- Property Market
- Utilities
- Flood Risk and Drainage
- Environmental and Ecology
- Planning policy

The full baseline report is available from Wyre Council. Whilst a range of assessments were undertaken across the disciplines listed above, it has not been possible to gather all information at this stage, meaning further work and assessments remain outstanding. Details of this further work are set out in the next steps sections of the baseline report and this masterplan report.

Three indicative layout and land use zoning options were developed as part of the baseline to provide an initial idea of how the Enterprise Zone masterplan will look. The options were broadly similar with a range of access arrangements and an emphasis on the integration of land use and transportation to generate efficiency in land utilisation and promote good linkages between people and place.

An initial baseline report was produced covering the findings; the main findings from each discipline are summarised here:

2.2 Summaries of Baseline Topics

Urban Realm

Hillhouse International has a large number of industrial buildings owing to the chemical testing and production nature of the site. The southern part of the site contains large structures, while the northern part of the site is more open with undeveloped land. The industrial site is bounded by fencing to create a secure environment, which is a selling feature of the site for the businesses located on it. To the northern part of the Enterprise Zone is an open access area. Immediately outside the Enterprise Zone, land usage is predominantly residential.

Access and Movement

Due to the secure nature of the site, access into it is limited to two points – the main gate on the western boundary, and an employee only gate on the southern boundary. The main gate is relatively inefficient meaning delays can occur, and is the only access point for HGVs and

visitors. There is potential for conflicts along Bourne Road, between residents and increasing HGV volumes. In the local vicinity, key routes such as the A585 Amounderness Way experience congestion.

Pedestrian and cycling access is generally limited with few safe or appealing routes in to the site, particularly the northern areas. Bus services in the area are reasonably frequent, but the closest bus stop is a 10-15 minute walk from the site entrance. Consequently vehicle movements in and out of the site are high. Within the Hillhouse site, paths for walking and cycling are inconsistent and this, combined with the layout of the site, does not encourage active movement around the site.

Property Market

Although the Wyre commercial property market is generally a small-volume, small-unit market, dominated by local small and medium size enterprises (SMEs) serving a relatively local market, Hillhouse International Enterprise Zone has a range of larger operators – Victrex, AGC Chemicals, Vinnolit – having a more international profile and larger than typical Wyre businesses. This is an ongoing legacy of the long-term chemical production use of the Hillhouse site. These key businesses and the gated nature of the Hillhouse International Enterprise Zone are the key differentials of the Enterprise Zone from other employment areas in Wyre.

Over half of the available employment land in Wyre set against the current Development Plan is located within the Hillhouse International Enterprise Zone, highlighting the importance of the Enterprise Zone to Wyre in providing future employment growth for the borough. A number of known proposals are already in planning stages and therefore not all employment land currently available in the Local Plan will be available for B class usage. Key markets for the Enterprise Zone will be building on its existing strengths, providing a secure location with Enterprise Zone benefits and offering an alternative location to local, at-capacity industrial estates.

Utilities

Distribution of utilities at Hillhouse has been achieved through using open shared trenches, although these are now mainly redundant. Hillhouse is serviced by electricity, gas, water and telecoms. A primary substation has been built on the site, and some producers on the site sell their power internally. Water apparatus at the site has been upgraded and replacement is continuing where needed. Some unknowns relating to the utilities, such as the condition of the infrastructure, require further investigations including underground visual surveys, are required.

There may be some reinforcement needed to wastewater and water network that would supply the Enterprise Zone. It will be necessary to ensure that the delivery of development is guided by strategies for infrastructure which ensure coordination between phases of development over lengthy time periods and by numerous developers.

Environment and Ecology

Previous usage of the site means contamination of land exists across the site. The hardcover which exists on much of the site acts as a barrier between potentially contaminated ground and land users. The land to the south and west of the site is predominantly residential, although the presence of trees acts as a shield between the site and properties.

The site is located near to the River Wyre estuary which is a European designated site: Morecambe Bay and Duddon Estuary Special Protection Area (SPA) and Morecambe Bay Ramsar site. The estuary is also a Site of Special Scientific Interest. There is the potential for land in the EZ to be functionally linked to the SPA.

The site includes land connected with ecological mitigation and compensation that was provided to offset ecological impacts associated with a previous residential development at Bourne Road (planning permission 10/00215). The ecological mitigation and compensation land requires further consideration and review if the land is to be brought forward for development as part of the masterplan.

Flood Risk and Drainage

Hillhouse International is located 20m west of Wyre Estuary, and the northern and southern extent of the site are located in Flood Zone 3, with a 1 in 100 probability of river flooding or 1 in 200 probability of sea flooding. However, the land benefits from flood defences on its eastern perimeter against 1 in 200-year events. Some works may need to be carried out to further protect new developments against climate change which could breach the existing flood defences.

Two main rivers, Springfield and Royles Brook are located within the site. Surface water and trade effluent discharge in to the River Wyre; the system for foul water drainage is unclear. The condition of the drainage network is not known; underground investigations need to be conducted to ascertain their state.

The expectation will be for only foul flows to communicate with the public sewer. Approved surface water drainage schemes will be expected to be supplemented by appropriate maintenance and management regimes for the schemes lifetime.

2.2.1 Summary

The main constraints which are present at Hillhouse and which need to be addressed to ensure that the masterplan proposals can be delivered are:

- The safeguarded rail line route
- River Wyre Estuary and surrounding land
- Flood risk
- Possible ground and water contamination
- Land ownership
- Utilities, including the gas line on the eastern side of Enterprise Zone

However, as per the baseline report, some further assessments are required, for example to ascertain the condition of the below-ground utilities infrastructure. The remaining queries which need further work are outlined in the next steps section at the end of this report.

3 Vision and Objectives

3.1 Introduction

This section draws on the work carried out as part of the baseline report. Constraints and opportunities identified within each discipline's assessment of Hillhouse are set out and included in the masterplan's vision and objectives. The vision is intended to be a high-level view of the redevelopment opportunities at the Hillhouse site; the masterplan is a living document that will need to be reviewed at regular intervals as development of the site evolves.

3.2 Key Considerations

The masterplan has been designed with a vision that is achievable with the ultimate goal being to meet local employment demands, whilst developing on a local and regional scale to compete nationally and internationally. The masterplan offers a premier riverside location for energy and chemical related industries, along with opportunities for the development of high quality business, industry and residential within an active mixed-use setting. The high quality public realm and optimised highway network will deliver an enhanced and well-connected place to do business and work, as well as providing efficient movement for the range of vehicles which will service the Enterprise Zone.

Development within the Enterprise Zone will be responsive to the industrial and business needs of the new tenants and the surrounding retail, education, leisure and residential context, making the most of what Thornton-Cleveleys and the wider Fylde Coast region has to offer. The mixture of land uses will help to support the existing community, alongside new residents with increased employment opportunities thus allowing for economic growth, enhanced green infrastructure, housing growth and open space networks.

The masterplan reflects the integration of land-use and transportation, with the proposed masterplan highways, access and movement being fundamentally linked with the land uses of the site and vice-versa. Such integration has resulted in the efficient land utilisation and the promotion of networks between people, places and spaces.

Key characteristics of the Enterprise Zone which have influenced the masterplan are:

- its location within one of Europe's leading regions and within the Lancashire Advanced Manufacturing and Energy Cluster – a key part of the Northern Powerhouse;
- the region's expertise of advanced manufacturing, engineering, aerospace, automotive and energy related industries;
- its legacy, as a chemical and energy production facility;
- its proximity to an internationally significant energy and chemical industries cluster (the Energy Coast);
- its proximity to Blackpool and links to skills, knowledge and services;
- its accessibility from the Amounderness Way (A585) and improving public transport connectivity; and
- its riverside setting and links to the surrounding areas of Cleveleys, Blackpool and Fleetwood.

3.3 Vision

Our masterplan has been formed with the aim of realising the following vision:

> "A high quality riverside residential and employment site, offering well connected premises for world leading chemical and energy production, logistics and manufacturing."

3.4 Objectives

The following objectives have been set out to help deliver the Vision. These are:

- **Objective 1: Meet the Demand from a Diverse Range of Sectors** – To deliver an adaptable and flexible masterplan which can be phased in a logical manner through the promotion of distinct character areas which meet the demand of modern businesses and industries from a diverse range of sectors;
- **Objective 2: Provide Improving Accessibility** - To provide a fully connected business, logistic and industrial areas which provides enhanced vehicular and sustainable transport infrastructure, which increases accessibility to and navigation within the Hillhouse International Enterprise Zone;
- **Objective 3: Deliver Critical Infrastructure** - To ensure that highways, utilities and other business critical infrastructure is commensurate with other premier business locations nationally and internationally and seeks out low carbon alternatives where feasible;
- **Objective 4: Marketing and Promotion** - To maintain high levels of new investment in Wyre through strong branding and marketing which promotes the International Enterprise Zone and the surrounding Fylde Coast Region as a leading location for inward investment;
- **Objective 5: Support Competitive Businesses, Knowledge and Innovation** - To provide supporting actions which help existing and new companies to improve their competitiveness and create an environment which allows for the exchange of ideas and knowledge, contributing to sustainable growth within the region;
- **Objective 6**: **Deliver Efficient and Functional Employment Plots** – Establish efficient plot layouts which maximise ability to develop the sites for industrial operation with large plots, well orientated buildings which address the street and logical access arrangements;
- **Objective 7: Create an Active, Productive and Liveable Environment** – Deliver a high quality and sustainable urban environment where cutting edge architecture is complimented with healthy, safe and connected spaces to create an interesting, active and engaged place to work and do business whilst protecting and enhancing the natural environment; and
- **Objective 8**: **Build a high quality neighbourhood** – Construct a new residential neighbourhood comprising a range of well-designed attractive homes, with green spaces and amenities, to satisfy the demands of the residential property market in Thornton-Cleveleys.

4 Masterplan Principles

4.1 Introduction

A series of principles for the masterplan have been prepared to provide some overarching guidelines which will help to deliver the vision and objectives of Hillhouse EZ. They provide a high level steer on what the masterplan aims to achieve, and how it will go about doing this.

4.2 Key Principles

The key overall principles of the masterplan are:

- Prioritise the creation of a new access road off the roundabout on Fleetwood Road North (B5268) to improve connectivity into and through the site;
- Deliver a new clearly defined gateway entrance off Fleetwood Road North (B5268) to create a sense of arrival and define the site's operation as an Enterprise Zone;
- Develop a green grid landscape approach, allowing for the creation of a network of multifunctional green spaces that provide opportunities for sustainable drainage systems, ecological enhancements and sustainable access into and throughout the Enterprise Zone, along with access to the adjacent Wyre Way and Wyre Estuary Country Park;
- Define a clear primary access route running north-south through the centre of the site to be utilised for access, amenity and an axis for green routes towards the Wyre Estuary;
- Create secure edges to the Enterprise Zone and plots within the site as required for controlled pedestrian and vehicular access to ensure the safe operation of its sensitive businesses;
- Deliver a secure and non-secure site within the masterplan, to attract and cater for different business needs;
- Deliver active movement through the site via connected pedestrian and cycle networks which link employees and visitors through the site and encourage activity, potentially through the creation of a recreational loop and activity parks;
- Work with existing employees and the local community to explore ways of strengthening relationships with local leisure providers for e.g. YMCA to encourage activity, networking and engagement within the Enterprise Zone;
- Deliver improvements to the frontages, highways and street infrastructure with regards to the existing Enterprise Zone, allowing for a more attractive and welcoming gateway;
- Enhance connections to the wider transport network to unlock the potential of the sites logistic and industrial capability;
- Deliver a common theme of quality in buildings, landscape, public realm and highway design alongside protecting and enhancing the natural environment;
- Achieve high levels of sustainability and wellbeing through increased active travel, sustainable energy production and active uses – as well as considering the environmental impact on the surrounding area; and
- Deliver a mix of land uses, including residential and associated commercial developments.

5 Development Areas and Land Uses

5.1 Introduction

This section sets out the development areas of the site. It forms one 'layer' of the masterplan and should be viewed in conjunction with Sections 6 to 9, which contain the other layers. Each layer of the masterplan serves as a set of parameters for the site; all development proposals coming forward on the site will need to be in agreement with these parameters.

5.2 Land Use Characteristics

The market review carried out as part of the baseline assessment identified the potential market sectors for the Hillhouse International site. Table 1 summarises the land use opportunities for the Enterprise Zone, with commentary on the location characteristics, unit sizes and potential timings of the uses.

Table 1: Possible land uses at Hillhouse International Enterprise Zone

Land Use	Market Opportunities	Location Characteristics	Potential Unit Sizes	Timing
Energy or Chemical Production	Large energy production schemes, including innovative energy sources Expansion of existing chemical operations Laboratory, research and support enterprises (B1b)	Secure site 24/7 operations Capacity for oversized vehicles. Large sites required	Bespoke build to scheme – operators would be requiring sites Agglomerated laboratory or research space with individual units 30-250 sqm	Current proposals are advanced in preparation Long term opportunities for laboratory or research spaces
Industrial/ Warehouse	B1c and B2 industrial Open air/storage areas for large plant and equipment Limited activity in warehousing/storage Local trades, servicing and workshops	Throughout EZ – secure and unsecure sites 24/7 operations Capacity for oversized vehicles.	<500 sqm units available for lease Growth units c. 1,000 sqm for lease Design and build opportunities for larger industrial units 2,000 – 5,000 sqm 0.5-1.5 ha open storage plots	Immediate small unit growth Medium term demand for mid-size units, though will continue to be a lower volume market Medium term for open storage
Office	Complements EZ target sectors. Small office premises Business centre/serviced offices Longer term opportunities for mid-size corporate occupiers. Corporate office space for core chemical, energy operations elsewhere in EZ. Risky speculative opportunity in the current market, but may benefit from momentum in the EZ.	High amenity sites Close to services/ public transport Green space desirable Mostly unsecure sites	Business centre with small office space <50 sqm and desk-spaces available Office buildings: 1,000 - 2,500 sqm with individual units at 50-200 sqm.	Medium to longer term.
Business Services, conference/meeting space	Spaces for off-site meetings, conferences, functions for the EZ businesses	High amenity location Views preferable Unsecure site	Meeting rooms/boardrooms about 30 sqm	Medium to longer term. Would benefit from increased business activity in the EZ,

Land Use	Market Opportunities	Location Characteristics	Potential Unit Sizes	Timing
	Opportunity to provide space to meet outside of the secure boundary Alternative space in northern Fylde Coast area, with potential outlook on River Wyre	Visitor parking requirements	Conference facility, including amenities 200 sqm	though consideration should be given to earlier development to act as a catalyst to attract businesses
Hotel	Positioned for the business market in the area.	Major road frontage if possible, gateway location Car parking Connectivity to core EZ areas Unsecure site	50-80 rooms, about 0.8 ha site.	Appears to be a market gap at present, with visitors to current EZ businesses using accommodation further afield
Retail	Targeting worker population. Take away, fast food, café and convenience retail provision serving the EZ. Long retail opening hours No comparison goods retailing requirements.	High visibility and accessibility. Gateway sites Car parking Unsecure site	Takeaway: <100 sqm Fast food/ coffee: 200-300 sqm	Medium Term
Gym/ Other Leisure	Budget gym, serving staff and residential populations.	Unsecure site High profile site, available to worker and residential populations. 24 hour operation Collocation with complementary uses.	200-300 sqm	Medium term opportunity, would require a higher worker population Timing should be in line with other facilities it would be located with.
Residential	First home buyers Mid-market Young families	Protected from core EZ uses, particularly chemicals and 24 hr operations	Detached Semi-detached Terraced	Short to medium term

Source: BE Group

5.3 Land Uses in the masterplan

It is envisaged that industrial uses will largely makeup the site, followed by plots designated for business uses. A smaller percentage of land designations will relate to logistics and hotel related uses. Another significant land use within the masterplan will be energy, the masterplan identifies areas being designated for a power plant and energy recovery centre, both of which are located within the secure area of the site. Aside from the main land designations of industrial and energy uses, residential areas have also been designated towards the western and southern areas of the masterplan.

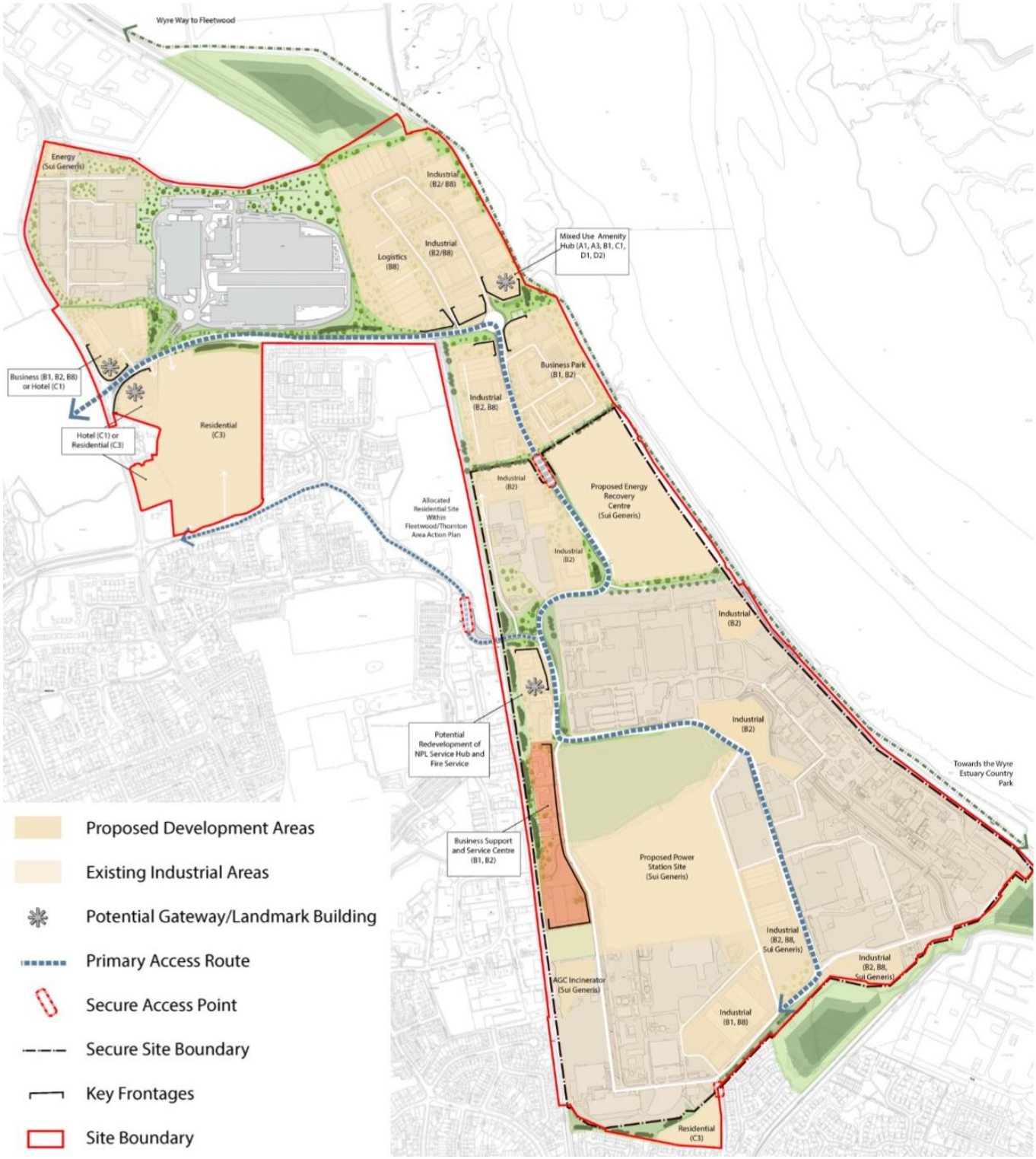
The new primary access road, will unlock developable areas of the site and create new opportunities for growth and development. Review of the property market has demonstrated there are a variety of short to long term opportunities which could be exploited by the Hillhouse International Enterprise Zone to expand uses, employment types and market sectors. The overall growth and development of the Enterprise Zone will occur at different rates in different areas of the Enterprise Zone, due to the readiness of sites, infrastructure available, ground constraints and access varying throughout the site. Therefore, longer term market opportunities may be aligned with longer term development sites, where possible, with immediate market opportunities to be delivered on sites readily developable.

As noted in the table above, some uses would have a preference for secure sites, with others a preference for sites outside of the security perimeter. Therefore, in order to optimise the attractiveness of the Enterprise Zone for the market, there should be provision of sites within a secure perimeter and outside a secure perimeter. Maintaining the current position of the secure fence (i.e. fully secure) is likely to result in a slower development and take-up of sites in the Enterprise Zone as the market available to the Enterprise Zone would be narrower. Furthermore, higher value uses, such as commercial office, retail or hub uses, would not be developed to the same extent (or at all) within the secure area.

5.4 Masterplan development areas

Figure 1 identifies the intents for the different broad areas of the masterplan based on land use; commentary on each of the areas is provided beneath.

Figure 1: Development Areas



Source: IBI Group

5.4.1 Secure Area (South)

The southern secure area is the core of the Enterprise Zone area at the moment comprising of high profile, important businesses for the Wyre economy. The masterplan supports the on-

going, large-scale chemical production within this area. The masterplan is consistent with plans and opportunities identified by existing chemicals operators (e.g. Victrex, AGC) with regard to site requirements and expansion.

The current energy projects (including Proposed Power Station) are also accommodated within the masterplan. With the establishment of a range of energy production and storage schemes, the energy sector's profile will match that of the chemicals production sector at present. The masterplan's layout and land uses in this area support the chemicals and energy sector as the principal functions, through preserving land uses, maintaining appropriate security, providing improved road layouts, etc.

Other land uses envisaged for this area should not impede these principal functions and where possible are complementary or supportive of them. There should be capacity within the secure area for businesses or facilities that service the energy or chemicals sector (engineering, maintenance, expertise, emergency services) and that would require sites/premises in close proximity to such uses. Unrelated businesses with a preference for secure sites can be accommodated within this area, although the priority should be for energy and chemicals sector and supporting businesses. It is expected that some lower order, unrelated businesses in the southern secure area will be relocated from this area as it grows, to accommodate priority sectors.

In the medium term, it is expected that the small units in the west of the site would be redeveloped, with opportunities to accommodate a mix of traditional offices, serviced offices and ancillary services in a contemporary node within the secure area.

5.4.2 Open Access Area (north)

The masterplan envisages that the northern perimeter of the secure boundary will be to the north of the existing secured land-uses on the site. This will enable areas to the north of this perimeter to target different markets from that within the secure area. This land is currently undeveloped, unserviced by utilities, requires highways access and will need some level of remediation. Therefore, it will be delivered in the second and third phases.

This area will be opened up through the creation of the northern access road and associated new north-south road, which will form the spine of this area. The new access point will enable the northern area to have a separate identity from the secured area to the south. The northern area will appeal to a broader array of businesses, including those that serve a more localised function.

The masterplan in this area envisages an ambitious range of employment uses, including industrial, light industrial, offices, warehousing and research/laboratory facilities. Furthermore, this area is planned to comprise the central hub for the Enterprise Zone, to provide support facilities such as meeting rooms, conference facilities, café, takeaway, gym, etc for the use of staff and businesses of the Enterprise Zone.

The market for such uses, particularly a considerable quantum of office and research space, is not yet established in the Enterprise Zone, as identified in the baseline report. Therefore, this area within the Enterprise Zone will take many years to reach maturity. Opening up of the area through the development of the spine road and the momentum established by the development of the key projects in the southern area (energy production, Victrex expansion), will help drive interest for sites in the northern area. Furthermore, a lack of sites elsewhere in Thornton-Cleveleys will provide interest in the northern area to cater for local businesses wanting to expand or upgrade premises. Therefore, firstly driven by demand for industrial and light industrial sites this area will be opened up. Once further momentum is established, there is

likely to be a gradual increase in demand for office and research/laboratory spaces. Office space would include traditional offices, as well as serviced offices. Even so, it is likely that considerable marketing effort would be required to identify and attract office and research/laboratory uses to the site. The marketing should highlight:

- The Enterprise Zone designation and its benefits;
- The growth of the Enterprise Zone over several years;
- The opportunities for support services to the established uses in the Enterprise Zone;
- The knowledge base within the Enterprise Zone; and
- Lifestyle benefits of living and working in Wyre.

The central hub can act as a catalyst to attract office and research/laboratory uses to the Enterprise Zone. The introduction of a high-quality facility providing a range of support services for staff and businesses will be a key attractor for additional firms looking to locate to the Enterprise Zone, particularly for office or research based enterprises. Therefore, the central hub should be developed as a first stage in this area after the spine road is established to help drive interest in the site.

5.4.3 Sites Near B5268 – Gateway Sites

There are sites within the Enterprise Zone area somewhat removed from the core Enterprise Zone area and proximate to the B5268. These are outside of the existing security perimeter and the development of these sites would be independent of the core functions and growth of the Enterprise Zone. Commercial uses could be established on these sites within a short timeframe and the masterplan identifies these plots as an early stage opportunity for growth.

The masterplan envisages a hotel for a site proximate to the junction of the B5268 and the new spine road for the Enterprise Zone. This hotel would be to primarily serve the business market associated with the Enterprise Zone. While there appears to be sufficient demand for a hotel to support the Enterprise Zone already, a hotel at this location would be greatly benefited by the new spine road and thus the timing of the development of the hotel would be dependent on this road development.

5.4.4 Residential

Residential sites have been identified in the masterplan, as shown in Figure 1 above. The main residential site is approximately 7.7ha, comprising the former Sainsbury's site and adjacent playing fields in the west of the Enterprise Zone area. It is considered that development on this site can commence within a short timeframe. It is sufficiently removed from the core employment areas of the Enterprise Zone, particularly the chemicals production uses, for development for residential uses. A key consideration in the development of this site for residential would be the management and mitigation of impacts due to the site being alongside the new, main access road for the Enterprise Zone. However, it is considered that such impacts are manageable.

The second residential site is a smaller plot in the south of the Enterprise Zone. This would be a redevelopment scheme, with the site currently being used as AGC offices. These offices are underused and it is understood that AGC are interested in consolidating their office functions elsewhere in the Enterprise Zone (secure area), which would enable this site to be redeveloped. The site is close to chemicals production uses and careful design and planning would be required in order to accommodate residential on this site, removing it from the secure boundary.

5.5 Land Use by Plot

Figure 2 and Table 2 set out the use class and floorspace yields, as well as the likely phasing of the commencement of operations on each plot within the enterprise zone. Floorspace yields are estimated from average development densities and storeys and thus should be seen as indicative only. Actual floorspace yields for plots may vary significantly, depending on the landholders' end needs, any plot-specific constraints, car parking requirements and open storage.

The land use classes referred to in Table 2 are set by the Town and Country Planning (Use Classes) Order 1987 (as amended), and are as follows:

- Shops (A1)
- Restaurants and cafes (A3)
- Business (B1)
- General Industrial (B2)
- Storage or Distribution (B8)
- Hotel (C1)
- Dwellinghouse (Residential) (C3)
- Non-residential Institutions (including public services) (D1)
- Assembly and leisure (D2)
- Other (Sui generis)

Proposals for land use classes A and D will be complimentary and support the delivery and operation of the Enterprise Zone.

Figure 2: Masterplan plots

Source: IBI Group

Table 2: Indicative floorspace yield by plot and use class and by phase

Plot	Site Area (sqm)	Uses	Potential Storeys	Potential Floorspace (sqm)	Potential Unit Ranges (sqm)	Comments	Phase
A	4492	Sui Generis (energy Generation)				Extant planning permission for energy generation scheme on part of the site, has not yet come forward	1
B	16860	B1, B2, B8, C1	3	6740	500-2000	Business or budget hotel	1
C1	8600	C1/ C3	3	TBC	50-80 rooms or 24 dwellings	budget hotel or residential	1
C2	8500	C1/ C3	3	TBC	50-80 rooms or 24 dwellings	budget hotel or residential	1
D	76680	C3			200-250 dwellings		1
E	72342	B2	1	17360	1000-10000	larger manufacturing units	3
		B8	1	11570	2000-8000	warehousing or open storage	3
F	24050	B2, B8	1	9620	200-2000		2
G	10214	B1	2	4090	50-500		2
		A1, A3, D1, D2,C1	2	1500	50-200	Central Hub: mix of uses in integrated Hub, not necessarily distinct units	2
H	27740	B2	1	6660	500-3000		2
		B8	1	4440	1000-4440		2
I	36251	B1	2	4350	50-1000	some may be other B class	3
		B1	2	4350	50-1000	laboratory/tech spaces	3
		B1	1	2900	50-1000	light industrial units	2
		B2	1	7250	200-2000		2
J	17412	B2	1	6960	200-2000		1
K	66790	Sui generis	1			Proposed Hillhouse Thermal Plant	1
L	11618	B2	1	4650	200-2000		1
M	33627	B1	2	2690	50-1000		1
		B2	1	4040	200-2000		1
		B8	1	2690	500-2690		2
		D2	2	1080	50-200		2
		Sui generis (Emergency Services)				assume approximately 30% of site area for emergency services	2
N	129980	Power station				Wyre Power	1
O	24467	Power storage					1
		B2, B8	1	4000	200-1000	remainder of site, not power storage area	2
P	24644	B1, B8	2	2960	50-500		2

Plot	Site Area (sqm)	Uses	Potential Storeys	Potential Floorspace (sqm)	Potential Unit Ranges (sqm)	Comments	Phase
		B8	1	8380	1000-2000		2
Q	8161	C3			15-20 dwellings		2
R		Power storage					1
	8995	B2, B8	1	1800	200-1800	remainder of site, not storage area	1
S	6000	B2					1
T	5434	Power generation				AGC Thermal Oxidation Plant	1
U	9000	B2				Victrex research and development	2

Source: BE Group
Note: To provide flexibility, plots B, C1, C2 and G are identified as a location for a hotel. It is the intention that only one hotel will be provided within the Enterprise Zone.

This development yield represents an ambitious growth scenario for the Enterprise Zone, significantly increasing its profile and breadth of uses. It will require significant effort in terms of promoting the site to attract investment and occupiers in order to achieve this ambition. Furthermore, significant infrastructure delivery would be required to open up the site for development, with the phasing outlined above assuming that such infrastructure can be provided in a timely manner.

Figure 11 shows the phasing of the delivery of the masterplan for the Enterprise Zone by plot. Delays to the roll-out of the early stages, changes in market demand or delays in the delivery of requisite infrastructure will have impacts on the overall phasing of the project. However, it is considered that the overall ordering of the Enterprise Zone development will remain the same.

5.5.1 Residential development

Local Plan Policy SA4 requires 250 dwellings to be provided within the Enterprise Zone. Plots D, Q and either C1 or C2, are allocated for these residential uses by the masterplan (at Figure 2); with an indicative number of dwellings shown in Table 2. A planning application is currently being prepared by NPL for residential development on the southern portion of plot D. The indicative dwelling numbers in Table 2 are based on the planning application being prepared on the southern portion of Plot D, including identified constraints; typical surrounding residential densities; an anticipated future demand for higher density residential development (e.g. when the various employment uses are developed at the Enterprise Zone creating jobs, a higher proportion of younger workers and an increased demand for a higher number of smaller dwellings – e.g. apartments and 1-2 bed houses).

The delivery of dwellings within the Enterprise Zone will be closely monitored and if delivery falls short of the levels anticipated, further plots will need to be identified for residential development. In this context, Figure 2 and Table 2 identify Plot Q for residential development with an area of 8,161 sq.m. This area of the masterplan site is under the ownership of AGC and during consultation aspirations were expressed to rationalise their land to better reflect their current operations. The re-masterplanning of this area could free up land to expand plot Q to accommodate additional dwellings at a future date.

6 Access and Movement

6.1 Introduction

Section 6 sets out the access and movement upgrades which are recommended to enable the full implementation of the masterplan. It forms one of the set of layers which together constitute the masterplan. In order to achieve the levels of development envisaged by policy SA4 of the new Local Plan and to achieve the overall masterplan vision, improved access and movement to and within the Enterprise Zone is essential. As well as the requirement for pedestrian and cycle connectivity within a landscape and green infrastructure framework (new Local Plan Policy SA4), a new site access and site spine road through the Enterprise Zone will be critical to achieving the masterplan vision and planning permission will need to be secured as early as possible.

The baseline report identified that access into and around Hillhouse International is a weakness and a threat to potential future development. Access in to the secure site is limited to two points – a staff entrance at the south end of the site on to Hillylaid Road, and the main access from Bourne Road for all other vehicles, including visitors and deliveries. Public transport does not adequately service the site. Walking and cycling routes to and within the site are poor and do not provide attractive and safe routes for usage.

6.2 Key access and movement concepts

The proposed masterplan has been developed to facilitate efficient movement of employees, visitors and goods through the site. Figure 3 shows the primary access corridor which will be established through the site, which will service secondary roads along with providing each plot with its own dedicated access. A secure access point is located along each of the primary access corridors, as well as along the southern boundary of the site, providing access to the secure area of the Enterprise Zone. These secure access points will promote vehicle movement efficiency and aid the secureness of the Enterprise Zone.

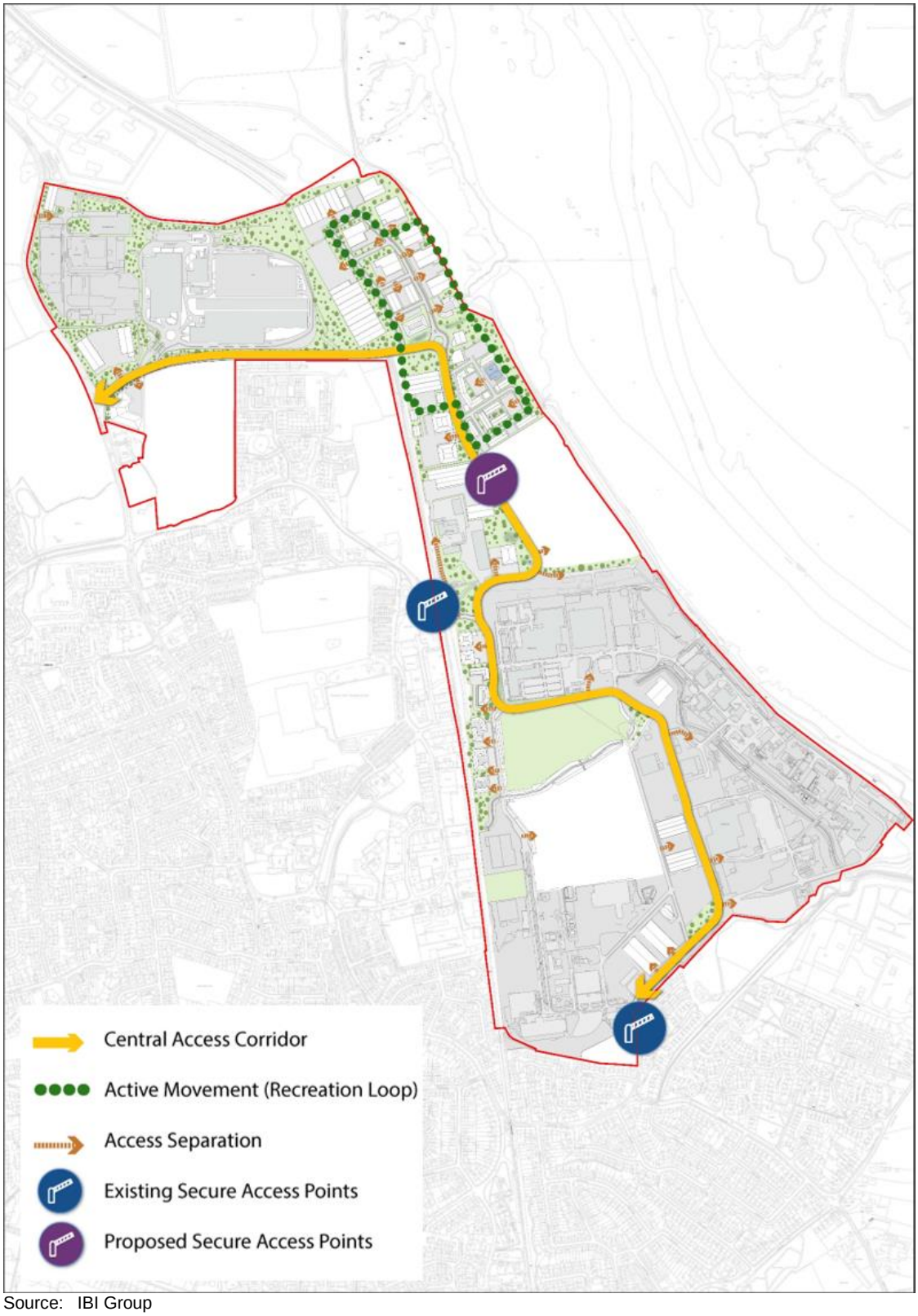
The layout has sought to encourage active movement through multi-modal streets and pedestrian and cycle networks, which are punctuated by attractive and strategically located public spaces and green corridors. This is delivered through a green grid concept which seeks to define edges, frame views and provide amenity for users of the site.

Networks such as the proposed recreational loop located within the non-secure areas promote permeability and active movement within the site. On a broader site scale, these networks link into the wider concept of the masterplans green grid approach, providing further access to the adjacent Wyre Way and the Wyre Estuary Country Park.

Figure 4 shows the interventions which are proposed as part of the masterplan; these are:

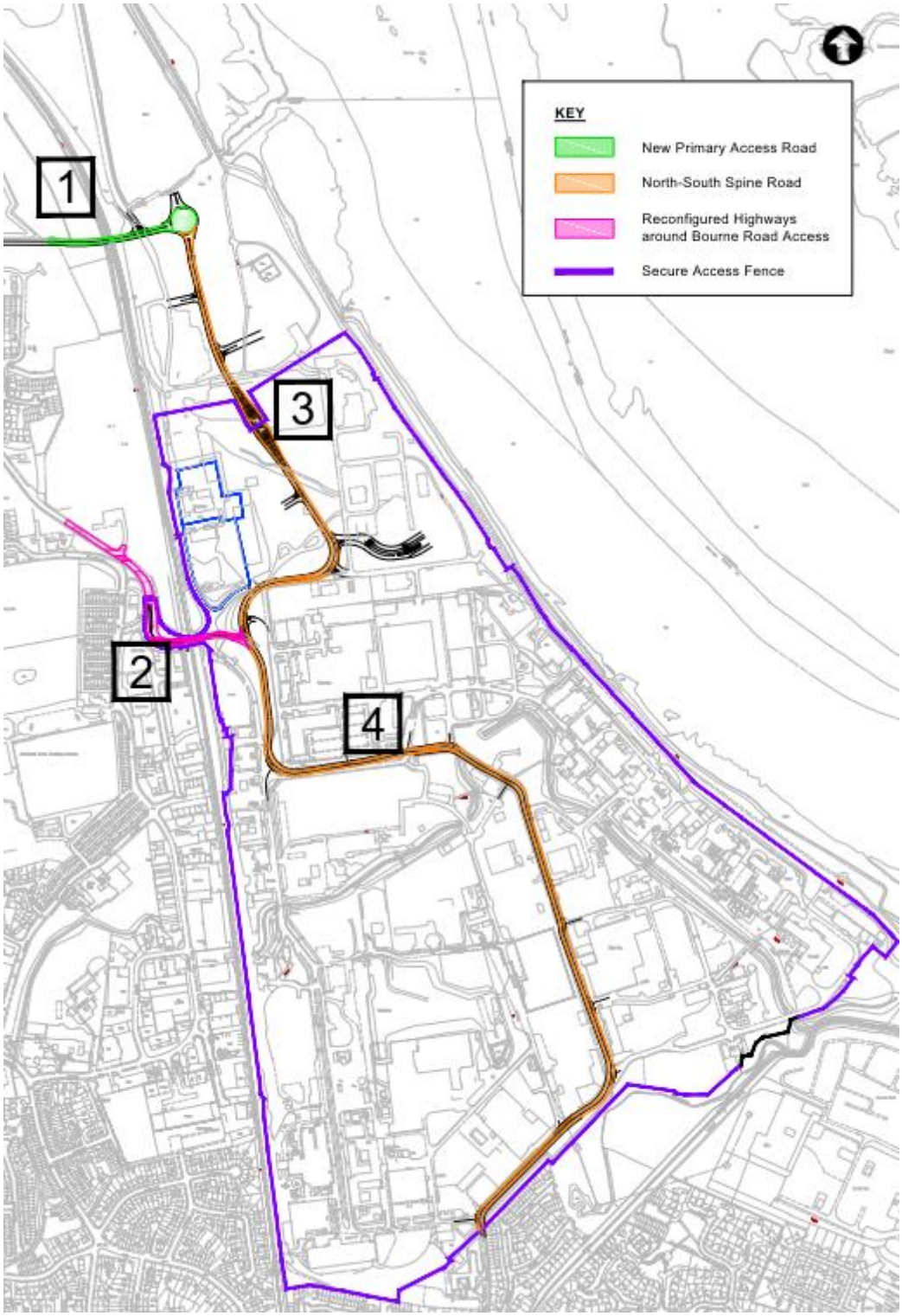
1. New primary access road from roundabout on B5268 into the northern part of site;
2. Reconfiguration of Bourne Road access gatehouse: in short term, additional lane for HGVs, in medium term staff only entrance;
3. Relocation of the manned gatehouse in line with repositioning of secure fence line; and
4. North-south spine corridor through entire site.

Figure 3: Access and Movement



Source: IBI Group

Figure 4: Access and Movement Interventions

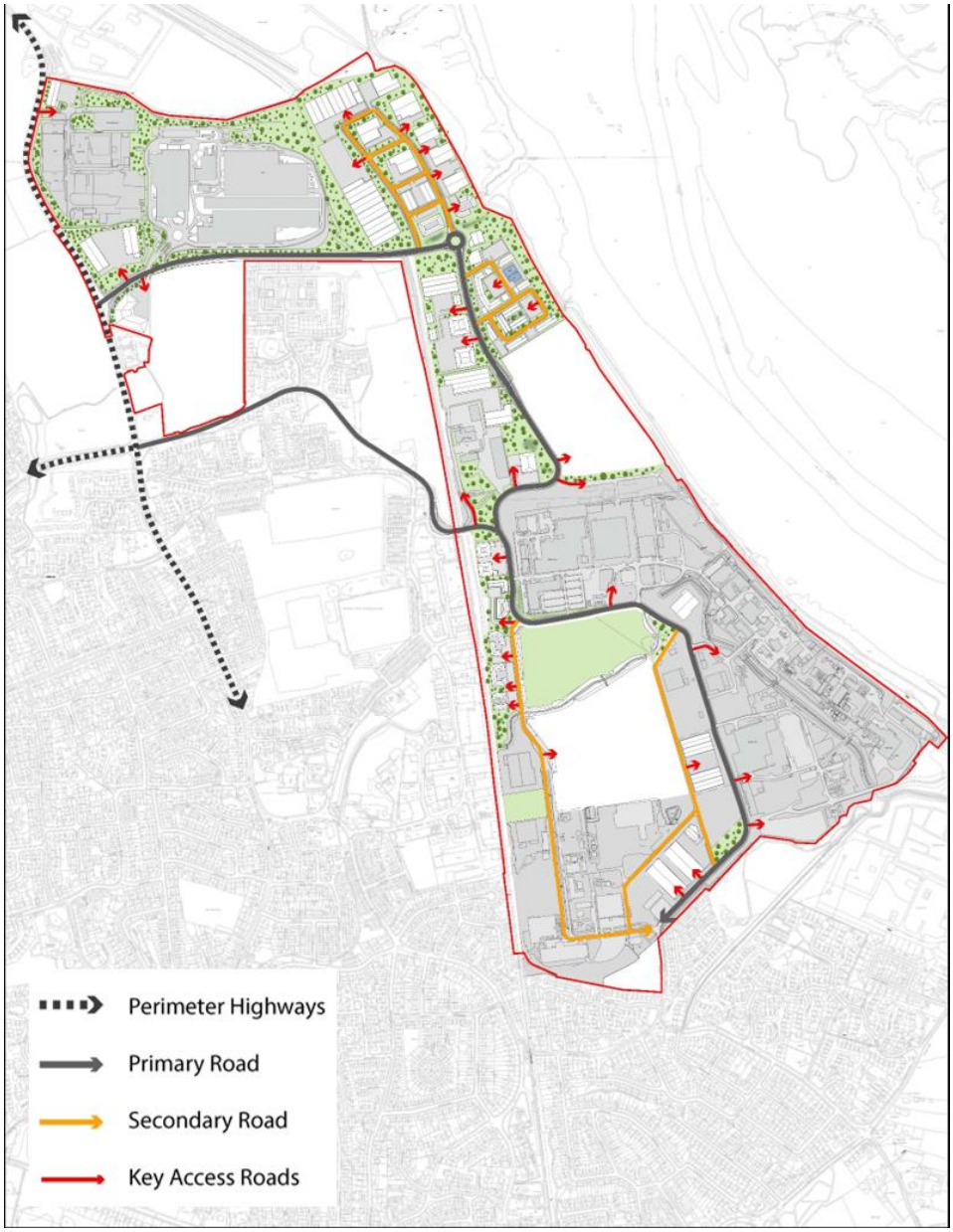


6.3 Highways

The road hierarchy of Hillhouse International Enterprise Zone will clearly define vehicular and active movement through the site. The road hierarchy diagram below reflects the masterplans perimeter highways, primary roads, secondary roads and key access roads.

All highways within the open access area of Hillhouse will need to be designed and built to adoptable standards, which will help simplify the installation of utilities apparatus and negate the need for easements and wayleaves. The highways will meet the needs of the heavy-duty vehicle and related uses of the site, with any landscape treatment and material selection will be used to provide appropriate scale, character and size and facilitate connection through the site.

Figure 5: Road hierarchy and movement



Source: IBI Group

The most significant access and movement interventions will revolve around the highways network, due to the dominance of cars and HGVs at the site. The entrance via Bourne Road has been identified as a key constraint to access for Hillhouse and a place of likely conflict between increased HGV movements and local residents, with Bourne Road being a mainly residential road. As shown on figure 4, to address this in the short term, the layout of the gatehouse will be slightly remodelled (2) to create an additional entry lane to allow HGVs for some occupiers on site to bypass the gatehouse and use a swipe pass or other security system to gain access to the site. This will prevent queues building up at the gatehouse and back along Bourne Road.

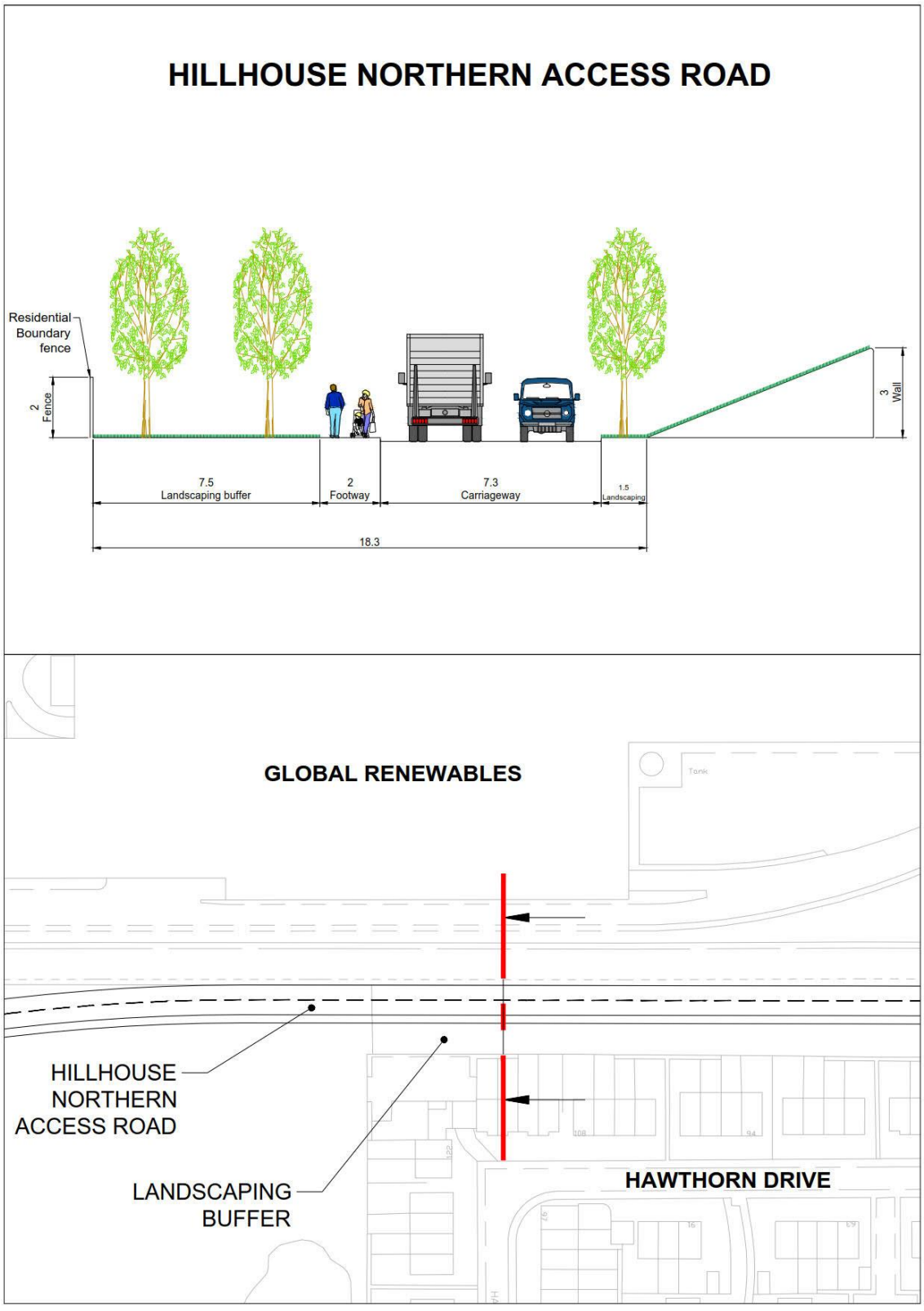
In the short to medium term, a new access road will be built in to the northern part of the site (1), from the short section of road coming off the roundabout on the B5268, and then form a north-

south spine road running down though the central part of the northern site and through to the southern part. This is shown in Figure 4.

6.3.1 Access road buffer zone

The new northern access road will be built as far away from the residential properties around Hawthorn Drive as possible and a buffer will be created between the road and the properties. The buffer zone is needed due to the expected considerable volumes of HGV and other traffic travelling along the new access road, which will generate noise and air pollution. The buffer will act to block the view and sound of large vehicles on the road, and capture some of the emissions and particulates produced by the vehicles. A width of approximately 18.3m has been allowed for the new access road and the associated buffer. This allows plenty of space for a highway 7.5m wide plus the buffer zone. The required dimensions of the buffer will be determined following a noise impact assessment; the buffer may be in the form of vegetation, a noise reduction fence, or a bund. An indicative plan of the highway and buffer are shown in Figure 6. The noise attenuation buffer is expected to be part of the design of the new northern access road.

Figure 6: Buffer zone plan



Source: Mott MacDonald

6.3.2 Security gatehouse

Following the construction of the new northern access road and the north-south spine road, the security gatehouse currently at the Bourne Road entrance will be moved to this new north-south spine road (3), in line with the repositioning of the secure fence line, as shown in Figure 4. The existing gatehouse at Bourne Road entrance will then become automated for staff access only, like the southern entrance from Hillylaid Road. HGVs will only be able to access the site via the new northern access road.

The spine road through the site will be upgraded (4) in order to demarcate it as the primary through route for vehicles, in part to divert vehicles away from passing through operational areas, as currently happens in some parts of the site. No off-site highways improvements are proposed as part of the masterplan, with all investment going on internal infrastructure. Issues of congestion and journey time reliability already exist on the A585; improvements to this are under discussion by Wyre Council, but it is outside the scope of the Enterprise Zone masterplan.

Where the Thornton Cleveleys Sports Club is currently positioned, a housing development will be built. Access to this will be possible from both the north and south.

6.3.3 Railway crossing

The initial urgent requirement to create a new northern access road serving Hillhouse International Enterprise Zone that is capable of accepting exceptional oversize and heavy deliveries of plant and equipment to facilitate the construction of the proposed multi million pound energy generation facilities on Hillhouse, can only be achieved by way of a crossing of the closed but safeguarded Poulton to Fleetwood railway. The essential early construction of this road will require it to cross the safeguarded route of the railway. The method of traversing the railway is not yet decided; it could be a bridge, tunnel or at-grade crossing. Discussions are required with Network Rail as the owner of the track, to ascertain the possibilities, which will be examined further in the forthcoming implementation plan.

The existing railway track is safeguarded from development by AAP Policy 5 (Transport Network Improvements) and Policy SA1 (Safeguarded Rail Sidings) in the Joint Lancashire Minerals and Waste Local Plan Site Allocation and Development Management Policies (2013) until 2031. The track could be brought back into use. The rail line is also a Biological Heritage Site. Policy CDMP6 of the new Local Plan states that development will be permitted provided it meets the requirement of the Core Development Management Policies and it has been demonstrated that corridors which could be developed as future transport routes (e.g. disused railway lines) are not prejudiced.

6.4 Public transport

The creation of the new northern access road will facilitate the operation of bus services in to the northern part of the site. Bus stops will be installed in the open access part of the Enterprise Zone to support bus services but they will not be able to run into the secure access area of the site for security reasons. The provision of bus stops close to the roundabout in the northern part of the site will provide sustainable transport options for workers on the site, and also visitors to the business/community hub and the Wyre Way, which will be accessible from the Hillhouse site. This will help to raise the profile of both Hillhouse and the Wyre Way. Bus services will be able to serve the new residential development and hotel as well.

6.5 Pedestrian and cyclists

Members of the public and workers on the site will be able to walk and cycle through the northern part of the Hillhouse site and on to the Wyre Way, thus opening up the legibility of this route, and making the most of the scenic views offered by the Wyre Estuary.

7 Form, Space and Massing Principles

7.1 Form

The form of the masterplan is focused around creating useable, active economic and industrial plots for development. The proposed form of the Enterprise Zone has been designed in order to the meet the various needs of the different uses and business users. The proposed form of the Enterprise Zone has taken the existing built environment and the adjacent River Wyre into consideration. Residential plots within the masterplan offer the opportunity for residential developers to bring them forward in-line with best practice and local standards.

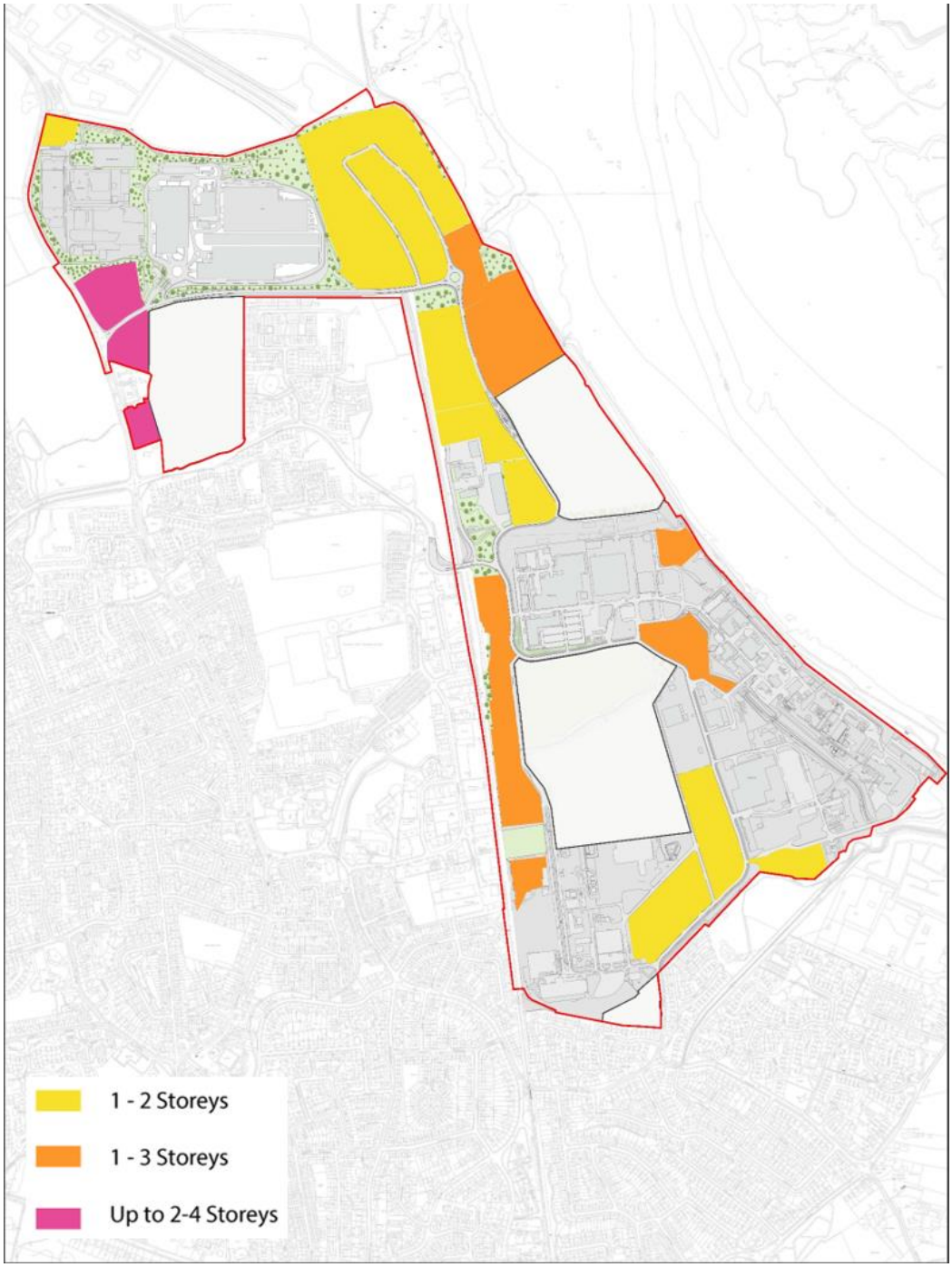
The urban grain of the masterplan reflects that the buildings fronting on to Fleetwood Road contribute to creating a strong frontage, along with defining the new primary access corridor into the site. The larger units and associated working space to the north of the masterplan are needed to facilitate the industrial and logistical uses of this area of the masterplan, with such forms being able to be achieved through the removal of part of the existing railway (see Section 6.3.3 for more details). The business park, north of the secure line consists of a series of smaller units with increased density to create activity and integration with the surrounding urban and natural landscapes. The grain within the secure area largely reflects existing operation. Overall the grain of the site should respect the natural frontage to the east and residential frontage to the west, whilst framing views towards the Wyre Estuary and defining a new gateway into the Enterprise Zone off Fleetwood Old Road.

7.1.1 Scale and Massing

The scale and massing of the development proposed within the masterplan further defines the sites operations as an industrial and business zone, distinguishing it from the surrounding residential context. With regards to the scale and massing the masterplan emphasises the following key design principles:

- Ensuring that development within the masterplan is in scale with its surrounding context, character, public realm and use;
- A largely constant building height is emphasised throughout the masterplan whilst promoting an interesting scale around/along key gateways, highways and junctions
- Follow a broad principle of lower scale adjacent to the Wyre Way and adjacent residential units with higher scale and increased massing to the centre of the site, along the proposed access corridor;
- Restricting the height of buildings located adjacent to the River Wyre, promoting a natural visual frontage. This is emphasised through buildings which will step down in height and form as they approach the River Wyre and Wyre Way;
- Promoting a scale and massing that contributes positively to the surrounding views and vistas into the site, including from adjacent residential areas, the Wyre Way and other viewpoints from across the estuary; and
- Building design should consider clean, simple, geometric forms and coordinated massing to produce overall unity, scale and interest.

Figure 7: Industrial and Business Building Height Plan



Source: IBI Group

Other industrial buildings, such as power stations and thermal energy plants, which could be brought forward at Hillhouse do not have suggested height restrictions and would be subject to detailed design discussions with the Council. Similarly, residential could be dependent on the future need for higher density dwellings, rather than the lower density housing which is currently prevalent in the area.

7.1.2 Built form

The proposed built form is to create a modern and efficient industrial and business premises within the Enterprise Zone. The building's design, materials and scale will be sensitive to the surrounding industrial, business, residential related uses, along with the adjacent River Wyre and surrounding natural environment.

Consideration of the built form has resulted in the design of the buildings to vary in form, with buildings next to the River Wyre more open in their form with the massing increasing at key nodes at the roundabout for example. The key approach of the masterplan, however, is to create a consistent and understandable form which provides logical industrial and business plots to achieve maximum efficiency within the site. Furthermore, green spaces will help define key corridors and active spaces, contributing to the functional and open nature of the site in key defined areas.

7.2 Spaces

Figure 8 below outlines generous provision of green space within the masterplan. The green approach to the sites design has been shaped on the principles of creating green spaces and corridors, and an attractive sustainable working environment. The baseline report identified that the large areas of vacant and poorly maintained space creates a negative environment for users and visitors, detracting from perception of the site. Images (not maps) in this section are indicative and are not intended to be portray how the site will look.

7.2.1 The Green Grid Concept

It is proposed that a green grid (Figure 8) is set up within the masterplan as a key driver to the form, movement and use of the Enterprise Zone. The grid is formulated using the Wyre Estuary, the proposed primary access route and the secure edges of the site as its axis. The resultant green corridors will provide a variety of movement corridors, amenity zones and landscape buffers for the site, as well as frame key views in and out of the site.

Critically, the green grid will soften the edges of the site and filter natural spaces through the site to knit into the surrounding natural and urban contexts. The green grid has also been used to establish a recreational loop for active movement within the site and will also provide opportunities for sustainable drainage systems (SuDS) and ecological enhancements.

Also, importantly, the development plots themselves will offer significant opportunity for the provision landscaping as part of the overall design which should complement and enhance the green grid.

Figure 8: Hillhouse Green Grid

Source: IBI Group

7.2.2 Key Spatial Concepts

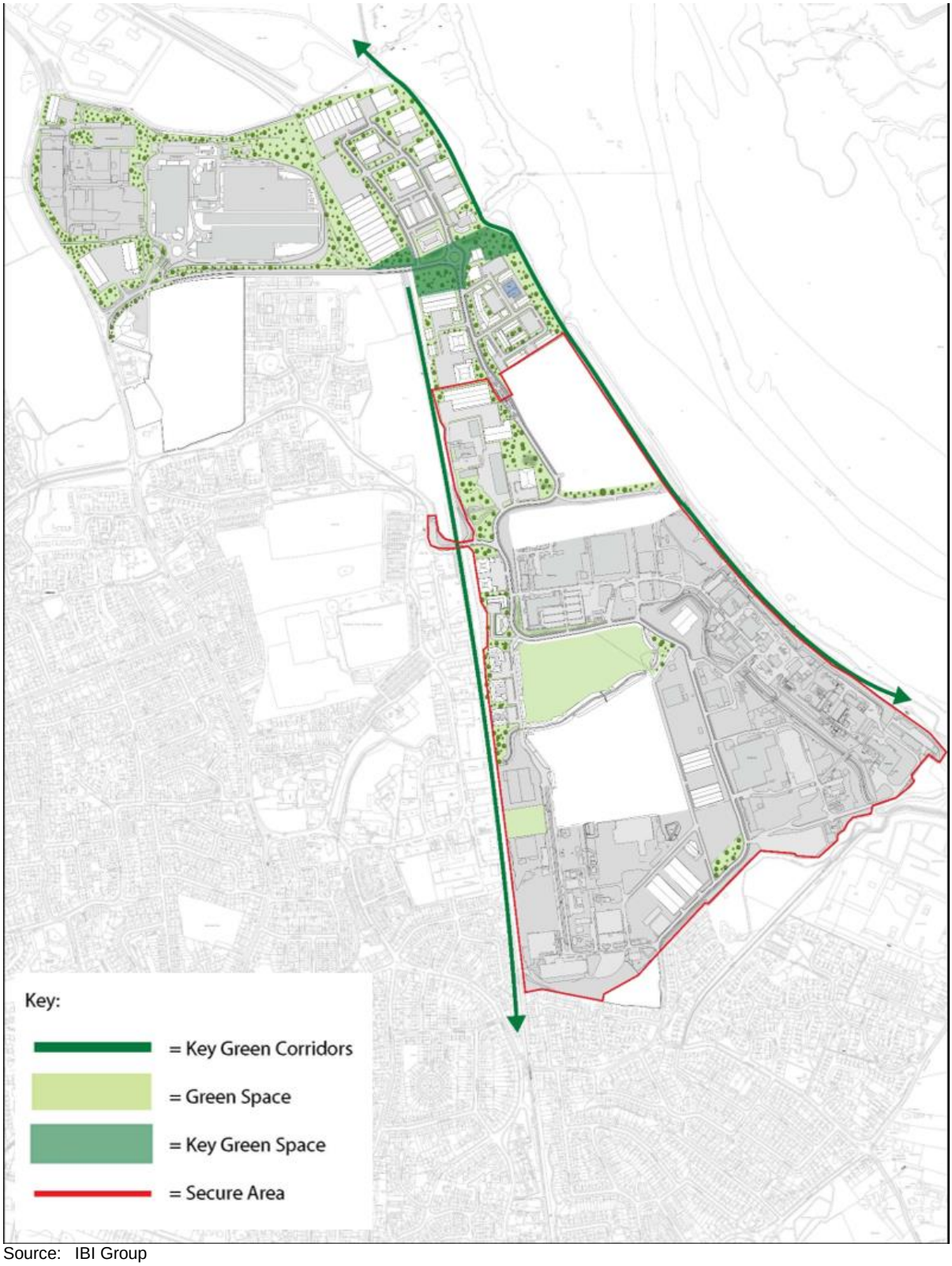
Such provisions in green space has resulted in the development of a green grid approach, described in previous sections, within the masterplan. The green grid reflects a network of multifunctional green spaces and corridors providing access and links within the Enterprise Zone, the adjacent Wyre Way, Wyre Estuary Country Park and the surrounding environment. The green corridors and spaces are not prescriptive of exact size, but instead act as parameters within which development proposals will need to conform. They are one set of parameters within a series of parameters within this masterplan, which when layered together constitute the masterplan.

The establishment of an ‘arrival space’ to the north of the masterplan, is made up of a landscaped area with several surrounding buildings, a key nodal roundabout and a feature pond. The proposed arrival space enhances the arrival experience for users of the Enterprise Zone, providing for a natural sense of orientation and promoting legibility within the site.

For those working within the secure area of the site, a green space, known as the ‘secure green amenity’ has been proposed. This central landscaped space will contribute to a high-quality environment, promote social activity and provide opportunities for development of flora and fauna.

Both the concept of the ‘arrival space’ and ‘secure green amenity’ are highlighted on Figure 9 with further descriptions below.

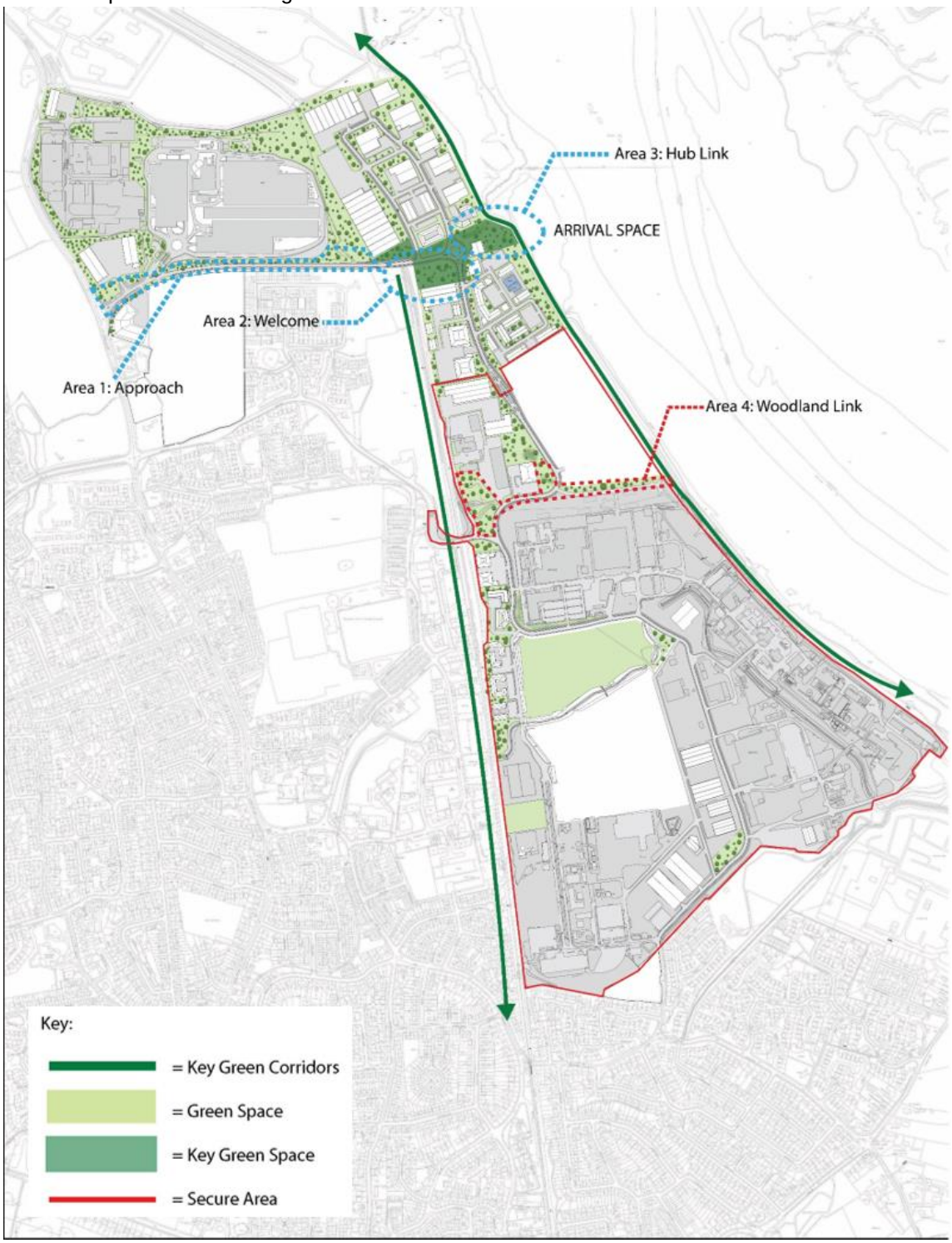
Figure 9: Green corridors and spaces



Source: IBI Group

7.2.3 Landscape Character Areas

The masterplan proposes four landscape character areas through the site which will help define key areas, soften edges, delineate the proposed primary corridor and improve amenity through the masterplan. The following character areas are defined.



7.2.3.1 Area 1: Approach

The approach from the B5268 roundabout sets the tone for the area. With the recycling centre to the north and housing to the south, we intend on drawing the focus to the arrival space and the green approach. The road will accommodate a high number of HGVs and smaller vehicles but will also encourage pedestrians and cyclists on a separate path. An avenue of trees and mounding with meadow seeding will further advance the green grid within the site, linking the water species with opportunities beyond, and providing noise attenuation to residential areas as part of the access road buffer (see 6.3.1).

7.2.3.2 Area 2: Welcome

Following the approach avenue, the welcome area allows views through to the Wyre Estuary, frame a new pond which will front the proposed industrial and business quarters (as well as providing SUDs opportunities) and wayfinding. It signals the entrance to a different zone with smaller units of retail and light industrial to the north with larger units and secure areas to the south.

The landscape proposal has clusters of trees to help filter winds and shelter the units but still allow some views through. Within the clusters of trees, it is proposed to have some simple trim trail pieces and some seating. The trail equipment can provide a challenge to passing joggers or it can be a reason for site users to get out and get active during lunch break.

7.2.3.3 Area 3: Hub Link

The hub link is an important interface between the public space along the waterfront and the semi-public space within the site. It invites users to experience the waterfront.

This space is intended to be an outdoor eating area with benches and tables and focused shelter, but still allowing for view southwards to the water and the nature that inhabits it.

7.2.3.4 Area 4: Woodland Link

This wooded area is within the secure boundary and as such will only be accessible by authorised users. The wooded area links the grid of green routes throughout the site but greatly reinforces the east-west link. Dense groups of trees and understory planting enhance the ecology and provide a varied habitat. It visually separates the site and breaks down the large scale, obscuring views to some of the buildings. Some areas will be more open with mown grass edges and paths but around the groups of trees will be less formal and less managed with a wild appearance.

8 Masterplan Character Areas

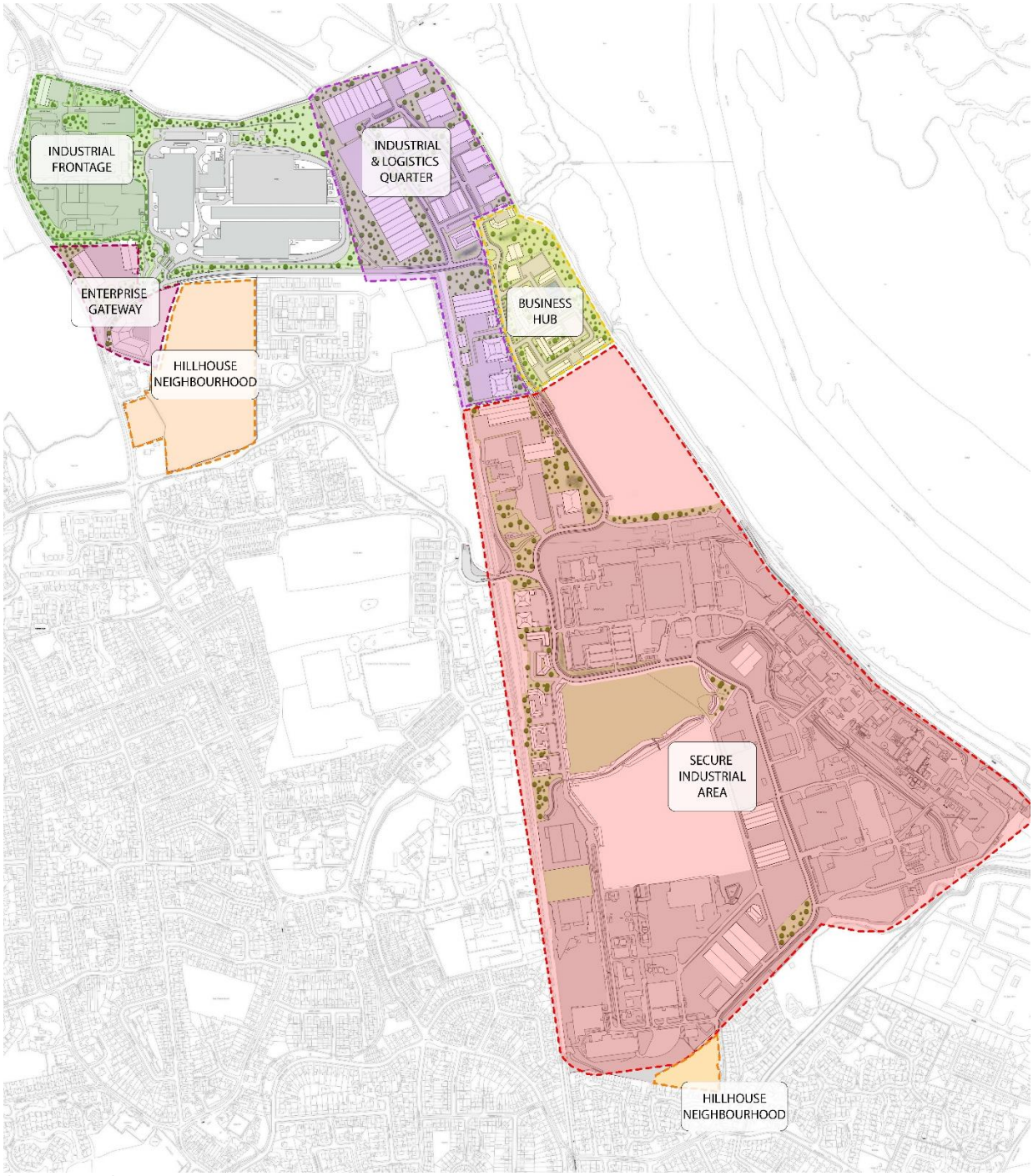
8.1 Introduction

The masterplan defines the Enterprise Zone into 6 distinctive but interconnecting character areas which define the future of the Enterprise Zone – these are shown in Figure 10 below.

To support the perception of distinct character areas in different areas of Hillhouse International Enterprise Zone, the design of buildings and space around the buildings will vary. The design principles to achieve the intended character of each area, along with images of styles of buildings, are presented here. Green landscaping may be included within character areas where appropriate and space allows, this will also provide opportunities for the incorporation of Sustainable Drainage Systems (SuDS) and ecological enhancements. The details of these character areas will be further refined as development proposals come forward, however the below is a guiding framework as a reference point.

- **Enterprise Gateway** – The Enterprise Gateway will act as the primary access point into the site, defined through a new access road along with several landmark buildings, catered towards industrial, business and commercial related uses.
- **Hillhouse Neighbourhood** – The Hillhouse Neighbourhood will be the home of a new residential development within Thornton-Cleveleys with scope for 250 accessible, high quality, well designed homes for the local community.
- **Industrial and Logistics Quarter** – The Industrial and Logistics Quarter will deliver a diverse typology of light industry, manufacturing and logistics property with a mix of building and plot sizes and scales. Large floor plates will be located to the north of the new access road, making the most of the space available, whilst smaller industrial plots will be located adjacent to the proposed business hub to make the most of key business connections.
- **Business Hub** – The Business Hub will consist of the development of a new business park featuring new landmark buildings and an active amenity hub, offering services for businesses and the working community. The hub will create an environment that promotes the delivery of architectural quality and high quality business operation.
- **Secure Industrial Area** – The masterplan will preserve and enhance the existing secured industrial area within the Enterprise Zone offering industrial, manufacturing, commercial and logistics related uses along with related services. This is supported by secondary secure access points into the site from Bourne Road and Hillylaid Road, to create a secure, safe and efficient space for businesses and employees. The secure area will be enhanced through building stock improvement, better designed highway and landscaping (including an internal recreational loop), as well as the potential for a dedicated amenity space within the secure area.
- **Industrial Frontage** – The Industrial Frontage will consist of the development and optimisation of the existing Burn Hall Industrial Estate, contributing in creating an accessible and high quality employment area that defines the quality of the Enterprise Zone.

Figure 10: Hillhouse Character Areas



Source: IBI Group

8.2 Character Areas

8.2.1 Enterprise Gateway

The Enterprise Gateway will act as the primary access point into the site, defined through a new access road, along with several landmark buildings, catered towards industrial, business and commercial related uses.

Key design principles include:

- Buildings of high quality contemporary design, set within a landscape setting and utilising high quality materials;
- Landmark buildings to be located at the entrance of the site, offering contemporary architectural styles and visual contributing to the environment;
- Variant building height ranging from 2 to 4 storeys with 4 storeys focussed at the gateway location;
- Buildings should contribute in creating active frontages and positive relationship with key access road into the site and the associated roundabout; and
- Secure car parking should be provided for each plot and conveniently located.

8.2.2 Hillhouse Neighbourhood

The Hillhouse Neighbourhood will be the home of a new residential development within the Thornton-Cleveleys community, offering accessible, high quality and well-designed homes.

Key design principles include:

- A range of high quality contemporary designed homes, with the use of brickwork and materials being appropriate and in keeping with the surrounding context of Thornton-Cleveleys;
- A range of unit types being provided including semi-detached and terrace housing;
- Well considered mix of building heights ranging from 2 to 3 storeys with responsive gable and frontage detailing, particularly for corner plots;
- Provide limited on street car parking by providing parking within plot where possible;
- Ensure access to high quality public and green spaces within the character area; and
- A buffer between housing and new northern access road to minimise noise impact.

8.2.3 Industrial and Logistics Quarter

The Industrial and Logistics Quarter will deliver a primer business, industrial and logistics area.

Key design principles include:

- High quality, well designed contemporary buildings, set within landscape surrounding;
- Delivery of a varied sized units catering for the needs of businesses, industry and logistics;
- Varying building height, between 1 and 3 storeys, with 3 storey properties focussed around the proposed primary access corridor and roundabout;
- Buildings should create an active frontage and positive relationship with the surrounding highways;
- The delivery of a high quality public realm, promoting pedestrian and cycle movements;
- Adequate secure car parking should be provided for each plot and conveniently located; and
- Units to cater for the parking and movement of HGV and service vehicles.

8.2.4 Business Hub

The Business Hub will consist of the development of a new business park featuring new landmarks buildings and an active amenity hub, offering services for businesses and the working community. The hub will create an environment that promotes the delivery of architectural quality and high quality business operation.

Key design principles include:

- High quality, well designed contemporary buildings, set within a high quality landscape setting;
- Varying building height, with the buildings stepping down in height from 3 storey to 1 storey next to the River Wyre;
- A dense urban fabric, allowing for the cluster of knowledge and business, with green corridors infiltrating the east of the area to create a natural frontage;
- The delivery of an amenity hub as a landmark building, creating visual interest and guiding users through the site;
- Buildings should create an active frontage and positive relationship with the surrounding highways;
- Landscaping elements between the River Wyre and the business hub, promoting visual and physical connection between these areas;
- The delivery of a high quality public realm, promoting pedestrian and cycle movements; and
- Secure car parking should be provided for each plot and conveniently located.

8.2.5 Secure Industrial Area

The masterplan will maintain the secured industrial area within the Enterprise Zone offering industrial, business, manufacturing and logistics related uses and services. This is supported by a secondary access into the site along Bourne Road and secure access points, creating a secure, safe and efficient space for businesses and employees.

Key design principles include:

- High quality, well designed contemporary buildings, set within landscape surrounding;
- Varying building height, reflected between the proposed power plants and other related uses, creating visual interest in the skyline of the secure area;
- Delivery of a varied sized units catering for the needs of businesses, industry and logistics;
- The delivery of a high quality public realm, promoting pedestrian and cycle movements;
- Enhance the environment and highway design to guide vehicles, cyclists and pedestrians through an attractive industrial setting;
- Secure car parking should be provided for each plot and conveniently located; and
- Units to cater for the parking and movement of HGV vehicles.

8.2.6 Industrial Frontage

The Industrial Frontage will consist of the development and optimisation of the existing Burn Hall Industrial Estate, contributing in creating an accessible and high quality employment area that define the quality of the Enterprise Zone.

Key design principles include:

- High quality, well designed contemporary buildings, set within landscape surrounding.
- Delivery of a varied sized units catering for the needs of the existing Industrial Estate.
- Future development will integrate within the existing form and highways of the existing Industrial Estate.
- Buildings should create an active frontage and positive relationship with the surrounding highways, especially those located along Fleetwood Road North. Such frontages must be designed to provide visual interest and activity.
- Adequate secure car parking should be provided for each plot and conveniently located.
- Units to cater for the parking and movement of HGV and service vehicles.

9 Utilities

Following the baseline assessment and considering the planned development of the site, this section sets out the utilities infrastructure requirements which have been identified as likely to be required to meet the needs of site occupiers. The utilities apparatus plans are to be viewed in conjunction with the other layers of the masterplan, such as the character areas and transport and access strategy. The utilities infrastructure requirements will be addressed in phases as developments come forward, as explained in the phasing section of this report. Initial surveys were carried out as part of the baseline study, but detailed utilities surveys, including ground investigations, will be required as part of the detailed design of site.

9.1 Utilities

9.1.1 Electricity

Hillhouse is currently well-served with electricity providers with more which are due to come on-line within the site. Electricity supply within the new development should be transmitted as high voltage to reduce voltage drop and sufficiently supply the developers. A spur will be required to each plot to permit the developer to manage the electricity supply appropriately. Should the on-site energy generation plants come on line, they will also require a means by which they are able to export excess electricity to sell back to the grid. The infrastructure for this will need to be considered as well. Due to the potential on-site generation of electricity from waste, the development is ideally suited to potential heavy power users to take residence. This will provide a highly efficient self-sufficient development allowing the revenue created on site to remain more within the local economy.

The onsite generation may also promote the possibility of Private Wire agreements between generator and offtaker. This will need to be agreed between both parties and the offtaker may still need a connection to the grid in the event of a power outage and it will be necessary to allow for the installation and maintenance of the private apparatus, however savings in cost per unit should help towards this. Private Wire agreements need to be carefully considered to make sure the generator and supplier are both able to honour their obligations.

Design of buildings and utility infrastructure at Hillhouse has the potential to be done in such a way as to promote and facilitate the development of the site. For example, the waste to energy plants not only address the regional waste issue, but can provide low cost energy within the site for other users via a private network, thus offering an attractive proposition to investors for locating at the site.

9.1.2 Water

The capacity of the potable and foul water networks are the main constraints to the expansion of Hillhouse International. The main potable water supply has experienced a number of bursts over the years and the secondary supply pipe has insufficient capacity. It is proposed to replace this main in the near future. The existing United Utilities (UU) gravity sewer is at capacity, to such an extent Victrex have to pump their trade effluent to the UU sewerage treatment plant. Upgrades to the on-site foul water treatment plant are recommended to increase the capacity it can process. Surface water is collected by an existing network, the majority of which is believed to discharge into the River Wyre.

Potable water demand may be achieved by the use of a borehole or connection onto UU potable water transmission main. The surface water infrastructure will need to be brought up to current regulations and be sized according to surface water run-off for the whole of the highway infrastructure, climate change and potential outfall from each of the plots. The provision of Sustainable Drainage Systems (SuDs) would provide sustainable management of surface water and perform other benefits including contributions to green infrastructure and ecological enhancements. Appropriate maintenance and management regime will be required for the lifetime of the SuDS.

Whilst a connection off site to a UU potable water transmission main has been considered, it would be worthwhile also exploring funding to reinstate the former ICI private potable water supply from the consented and live boreholes at Pilling, although this is 7km away, which is under the control of NPL group and therefore the Enterprise Zone. The former pipe easement corridor is in place and abstraction licences are current for a supply which would exceed that currently required on the Enterprise Zone and the site could therefore be self-sufficient in terms of potable water.

A private water supply would add further cache to the offer at Hillhouse International Enterprise Zone. Management of the foul water needs to be undertaken on a plot by plot basis with each developer. This can potentially be achieved by using a package water treatment plant, however, size would be dependent upon the demands of the developer. To increase water supply, whilst a local borehole may provide a saline supply, it is suggested that this is tested to see if it would be possible to extract water well below the water table. However, using the offer available at Pilling may be more appropriate than installing a borehole in a saline area.

9.1.3 Gas

The development will need to be served by a medium pressure gas ring main; to facilitate this, it will be necessary to provide a pressure reducing station.

The high-pressure gas main which follows the boundary of the site on three faces may have sufficient capacity, however this would need to be approved by Cadnet.

Demand calculations for the potential uses would need to be carried out, high usage industry for example smelting or heavy fabrication may not be feasible should the capacity of the local infrastructure not be sufficient. Demand calculations, together with the appropriate level of diversity applied, would need to be discussed with the relevant stakeholder to ascertain network capacity. Should there be a shortfall in capacity it would be necessary for the stakeholder to carry out of-site reinforcement.

Should faults occur on the gas pipeline, this would usually be carried out by the stakeholder. Due to the sensitive nature of the escaping gas, repairs are usually carried out very swiftly.

The lifespan of the apparatus is dependent upon the conditions the apparatus is in and whether there is a risk of third party intervention. Experience has shown that gas pipelines typically have a lifespan in excess of 50 years.

9.2 Summary

In conclusion, there will need to be utilities installations, particularly at the northern end of the site where there are currently no functioning utilities infrastructure. However, until the exact nature and location of developments are agreed, it is not possible to know exactly what will be required; each individual development and/or occupier will need to calculate the utilities requirements for their development. Consequently, although the phasing of the utilities

investments is outlined in the phasing section 10.3, to a large extent utilities infrastructure will be responsive, according to the needs of and order in which development proposals come forward.

10 Phasing

10.1 Overall Phasing

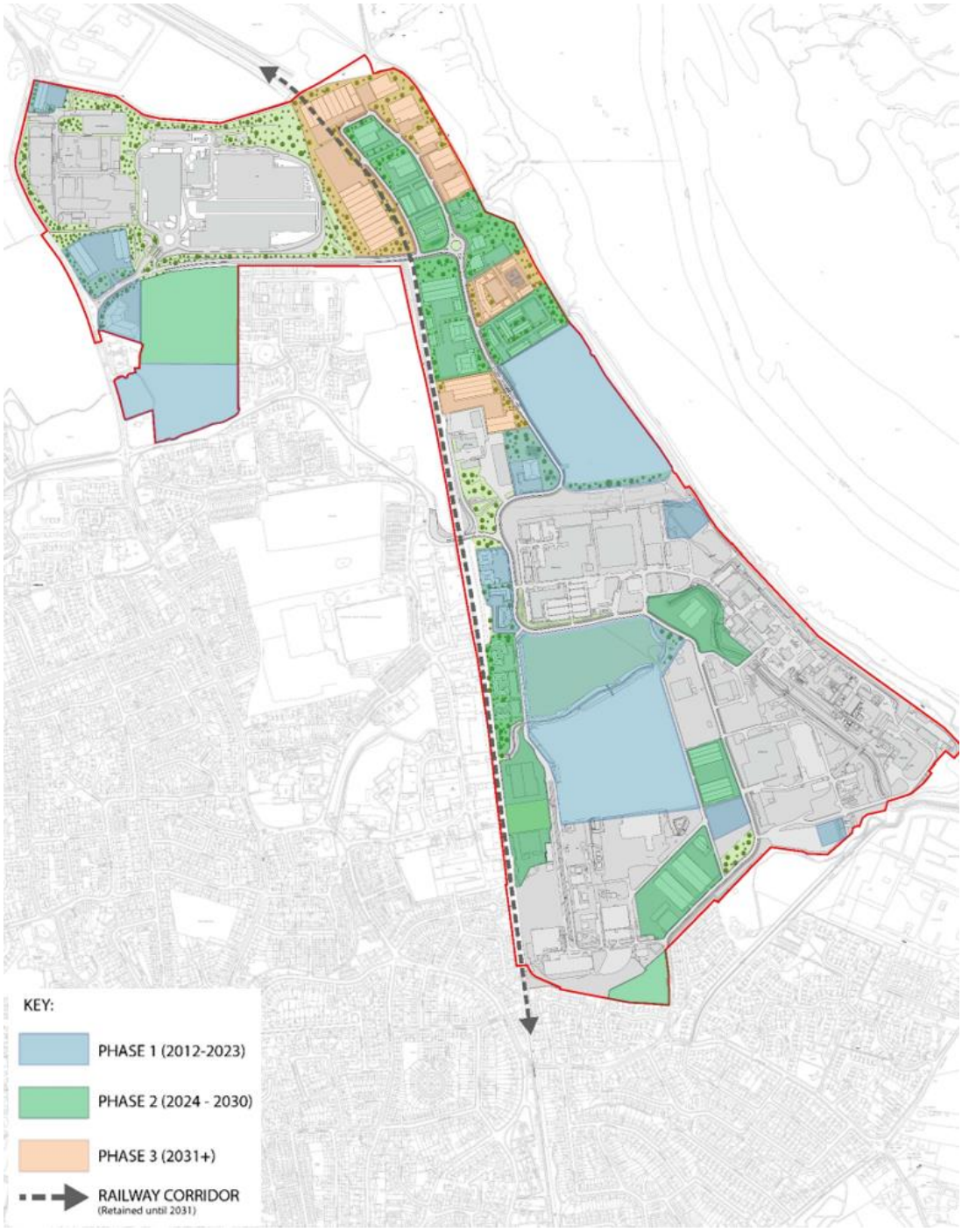
Hillhouse's designation as an Enterprise Zone applies from 2016 to 2041, and the delivery of the masterplan will be spread across a significant part of this period, with the proposed masterplan shown in Section 8 of this report being the end result to be achieved post 2031. The delivery of the enabling infrastructure works will be front loaded towards the earlier phases of the masterplan, to support the delivery of plots. Three main phases for delivery of this masterplan have been established:

- Phase 1: 2019 – 2023
- Phase 2: 2023 – 2030
- Phase 3: 2031 onwards

Figure 11 identifies the areas of the Enterprise Zone to be delivered within each phase. However, in reality there will be some overlap between phases. A number of plots within the Enterprise Zone are ready for development in terms of access and utility connections; these are included in Phase 1. Other plots need access and utilities to be in place before they are ready for further development. Therefore, these enabling works will need to be completed first, before buildings can be constructed and businesses move on site.

In Phase 1, sites which already benefit from planning permission or are at an advance stage of preparing a planning application, such as the residential site (Plot D) adjacent to the Burn Hall Industrial Estate and Waste Technology Park, can be brought forward quickly. Apart from that, the philosophy of Phase 1 is to begin work which will enable other parts of the Enterprise Zone to be brought forward. This mainly involves beginning the new northern access road in to the northern part of the site, and the spine road from that down into the secure access area. It is vital this is done sooner rather than later because development of the northern part of the site will be severely impeded without it.

Figure 11: Phasing plan



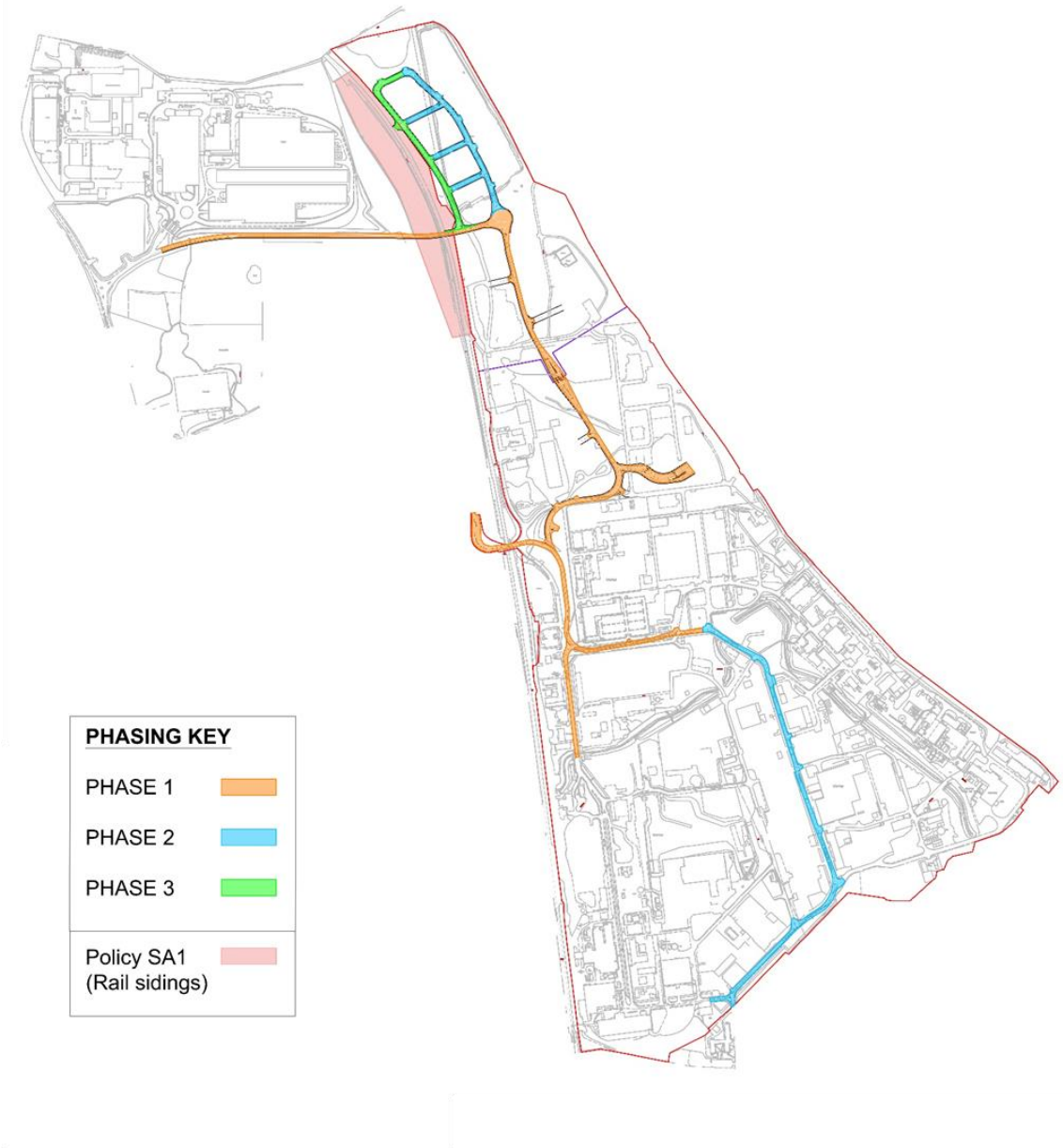
Source: IBI

10.2 Highways Phasing

As indicated in the plan below, it is currently envisaged that highway and access improvements will be implemented in three broad phases. Phase 1 establishing the new northern access route

and secure site access controls; Phase 2, half of the northern loop, but leaving the rail corridor unaffected; and Phase 3, the completion of the northern loop. Within these phases is the opportunity to upgrade and rationalise the existing estate roads in the southern portion of Hillhouse.

Figure 15 Highways Phasing



10.3 Utilities Phasing

The principal behind the utility infrastructure installation is based upon early installation of ring main apparatus. The apparatus installed will need to be sized based upon predicted demand for each of the units. A degree of diversity will be applied to the demand calculations to ensure that

to each of the plots available, utility capacity will not constrain potential developers. New highways in the open access area will be designed and built to adoptable standards.

Electricity sub-stations and gas governors will be sited based upon predicted demand, they will need to be accessible to carry out maintenance. Surface water will outfall into the River Wyre, infrastructure will need to be designed to retain sufficient volume of water during a storm event and high tide. Foul water treatment capacity is limited in the development. As the actual uses for each plot are unknown it is recommended that foul water treatment is managed on each of the plots. We have been advised that potable water capacity is limited on site, however a 24" United Utilities water transmission is located along Gamble Road, subject to capacity availability this may prove to be a suitable source.

10.3.1 Phase 1 (2019 – 2023)

Access road from the north to be constructed, providing access to the 'power from waste' development in the south and the northerly spine road from the roundabout. Sewers are traditionally installed within the carriageway, therefore the sewers installed in this phase will need to take into account future requirements. It may also be worth considering installing the civils infrastructure for other services within the footway and verges. This will permit the landscape to be completed thereby improving the area, which may in turn result in increased demand. Potable water design will need to ensure that 'dead legs' are avoided which would cause a health hazard.

Service demand for the new developments on and off site are believed to be achievable based upon existing capacity in the surrounding networks. Therefore, no utility reinforcement is currently believed to be required until the developments come on line.

10.3.2 Phase 2 (2023 – 2031)

As the various units are released, they will need to connect with the existing infrastructure within the highway, this will permit minimal disruption to the completed landscaped areas and reduced lead-in time. Offsite re-enforcement may need to be carried out in this phase depending upon demand requirements for the units.

10.3.3 Phase 3 (2031 onwards)

During this phase, the western road will be constructed which will provide access to the units placed on the disused railway line. Following a similar methodology as Phase 1 the sewers will be installed within the carriageway and the other services within the footway and verge.

11 Further Work and Next Steps

11.1 Northern Access Road

Planning permission will be required for the new northern access road which will radically improve access in to the site. This will require engagement with Lancashire County Council as the local highways authority and Highways England in relation to the strategic road network. The new access road will require planning permission; as part of this application, a number of detailed assessments will be required, for example transport impact assessment and environment assessment. The scope of the planning application assessments will need to be agreed with Wyre Council, Lancashire County Council and Highways England.

The immediate building of the new northern access road to alleviate Bourne Road is strongly recommended. Without this being prioritised for early implementation of the masterplan, the following implications on the delivery of the rest of the masterplan will be created:

- All vehicles, including HGVs, on site workers and contractors, will have to use the Bourne Road access and entrance;
- It will not be possible to have differentiated secure and non-secure boundaries as all vehicles and people will need to enter the site via the secure access at Bourne Road; this will reduce the viability of the site to meet the requirements of the local industrial property market;
- Congestion delays at Bourne Road owing to the lack of increased capacity as entrance will need to be retained in the current location. This will lead to congestion delays and occupier discontent;
- The junctions of Bourne Road / Fleetwood Road North and Bourne Way / Amounderness Way (A585) will experience heavy concentrations of traffic and delays;
- Public transport penetration of the site will not be possible;
- The benefits to surrounding residential communities will be limited by the lack of public access to the community hub and Wyre Way; and
- Reduced flexibility of Hillhouse to meet the changing market demands.

11.1.1 Engagement with Network Rail

The proposed new northern access route will need to cross the safeguarded Poulton-Fleetwood rail branch. Discussions will be required with Network Rail to facilitate this and to understand the status of the railway line beyond 2031, to when it is currently safeguarded, and to agree the most suitable method for the new road to cross the railway.

11.2 Utilities

The majority of the service trenches within the development are abandoned, however in isolated sections, for example within the AGC Chemicals site, the service trench is used to carry connecting infrastructure from one location to the next. In some respects, these service trenches form a barrier to development. If they were rationalised it would permit the footprints of the individual plots to reflect developer requirements which may result in a higher level of demand.

In addition to the above, to progress the development further it would be useful to close out the items below which will reduce risk to the project:

- Capacity of existing infrastructure;
- Demand of proposed land uses;
- Accurate location and identification of existing apparatus;
- Contact Cadent to obtain the width of easement / wayleave for the High-Pressure Gas main;
- Contact surrounding utility companies to request network capacity against projected demand;
- Feasibility study into the re-introduction of off-site potable water supply;
- Should excessive off-site re-enforcement of surrounding utility company's networks be required – refine the diversity calculations of the demand requirements to see if the costs can be reduced; and

11.3 Detailed Surveys

Each development proposal brought forward at Hillhouse will need planning permission. As with the new northern access road, a range of detailed assessments will likely be needed to support the planning application. Again, the scope of these will be agreed with Wyre Council as appropriate. It is to be decided whether the outstanding detailed ground and environmental surveys will be carried out for the site as a whole, or on an individual basis for each development.

Detailed ground and environmental/ecological surveys need to be carried out at the site, and should be carried out on a development led basis in the absence of third party funding availability. A ground penetrating radar survey should be undertaken to identify all utilities infrastructure, and assessment of the conditions of the existing infrastructure should be undertaken so as to gain a fully accurate picture of the utilities network at Hillhouse. More detailed surveys relating to contamination and waste disposal within the site are also required, particularly in relation to the reservoir at the northern extent of the site, which is to be filled in as part of the development of the site. Consideration and review of land connected with existing ecological mitigation and compensation within the site that is associated with previous residential development will also require further consideration.

Table 3 below provides a summary of further work and next steps that will be required to deliver the masterplan

Table 3: Further work and outstanding queries to be addressed

Issue and What to be done
Development demand Assessment of demand for proposed land use
Utilities infrastructure condition Intrusive site investigation
Utility demand Utility demand assessment
Utility capacity Discussions with providers

Infrastructure demand and capacity
Discussion with infrastructure providers

Pipelines
Establish width of easement/ wayleave for High-Pressure Gas main

Ecological constraints
Phase 1 Ecology assessment
Project Level Habitat Regulation Assessment
Review of ecological mitigation and compensation land

Landscape and green infrastructure
Landscape and green infrastructure framework
Funding mechanism for provision and long term maintenance of green infrastructure

Contaminated land and water
Intrusive site investigation

Flood risk and drainage
Flood risk assessment

Hazardous waste
Intrusive site investigation

Off-site traffic impact
Traffic impact assessment

On-site sustainable transport
Sustainable transport study including pedestrian and cycle connectivity
Travel Plan

Environmental Health
Noise impact assessment
Air quality assessment

11.4 Five-year review

Hillhouse International Enterprise Zone's masterplan is intended to be a framework for the development of the site, and for this reason it is a live document. Inevitably the Hillhouse site will evolve over the 25-year period of the enterprise zone status. Therefore, to ensure the masterplan remains effective in guiding the delivery of the site, it should be reviewed and updated every five years.

11.5 Funding

Indicative costs for the identified required infrastructure at Hillhouse International Enterprise Zone to enable the full realisation of the masterplan have been prepared. These fall in to three main areas: highways; utilities; and the lagoon. At this stage the costs are indicative only and are based upon approximate rates and a 2D highways concept design. The forthcoming implementation and funding plan will involve further work to add certainty to the estimates as the planning process progresses, including: preparing the designs on a 3D topographic survey; ground investigation; utility investigation; and structural investigation.

The funding and implementation plan will also identify the order and method of fully implementing the masterplan. As part of this, funding methods will be outlined. Third party funding needs to be sourced to enable the following:

- A landscape and green infrastructure framework incorporating structured tree planting, and pedestrian and cycle connectivity within and where possible outside the site
- A Project Level Habitat Regulation Assessment (HRA) for the entire Enterprise Zone (having regard to the mitigation measures in the Habitats Regulations Assessment of the Local Plan)
- A Flood Risk Assessment (FRA) for the entire Enterprise Zone must be carried out as planning applications begin to come forward, and the results used to take a sequential approach to overall site layout
- Residual surface water run-off should drain direct to the river Wyre via Springfield in the north and Royles Brook in the south. This will require a masterplan-wide drainage strategy
- Springfield and Royles Brook are both designated Main Rivers. The prior written consent of the Environment Agency is required for any proposed works or structures in, under, over or within 8 metres of the top of the bank of the watercourse and 16 metres of the estuary flood defences. An open space buffer should be provided to protect the watercourse from detrimental impacts.
- A ground and water contamination desk study will be required and followed, if necessary, by more detailed site investigation.If such third party funding cannot be secured, the above will be sourced on a development led basis