



6.0 DESIGN PRINCIPLES

6.1

N Masterplanning approach

This Section and Section 7 illustrates how the strategic masterplan framework and approach to the Phase 2 development has the integration of the dwelling, movement and landscape at its core. This is an approach which derives from the traditional interdependence between the built form of the market town and the particular landscape features of the fenlands.

The integration of dwelling, movement and landscape spaces underlies the structure of the block, which in turn, by defining and relating a series of housing and landscape typologies, defines the particular sense of place for Northstowe Phase 2.

It is expected that a detailed design code for Phase 2 will be required by planning condition.

LANDSCAPE STRUCTURE

A network of existing and proposed landscape elements (defined in Section 6.9) link back to the wider landscape structure. These principally consist of mature trees, hedgerows, proposed sustainable drainage systems and open spaces of a variety of characters. This network defines a series of development parcels.

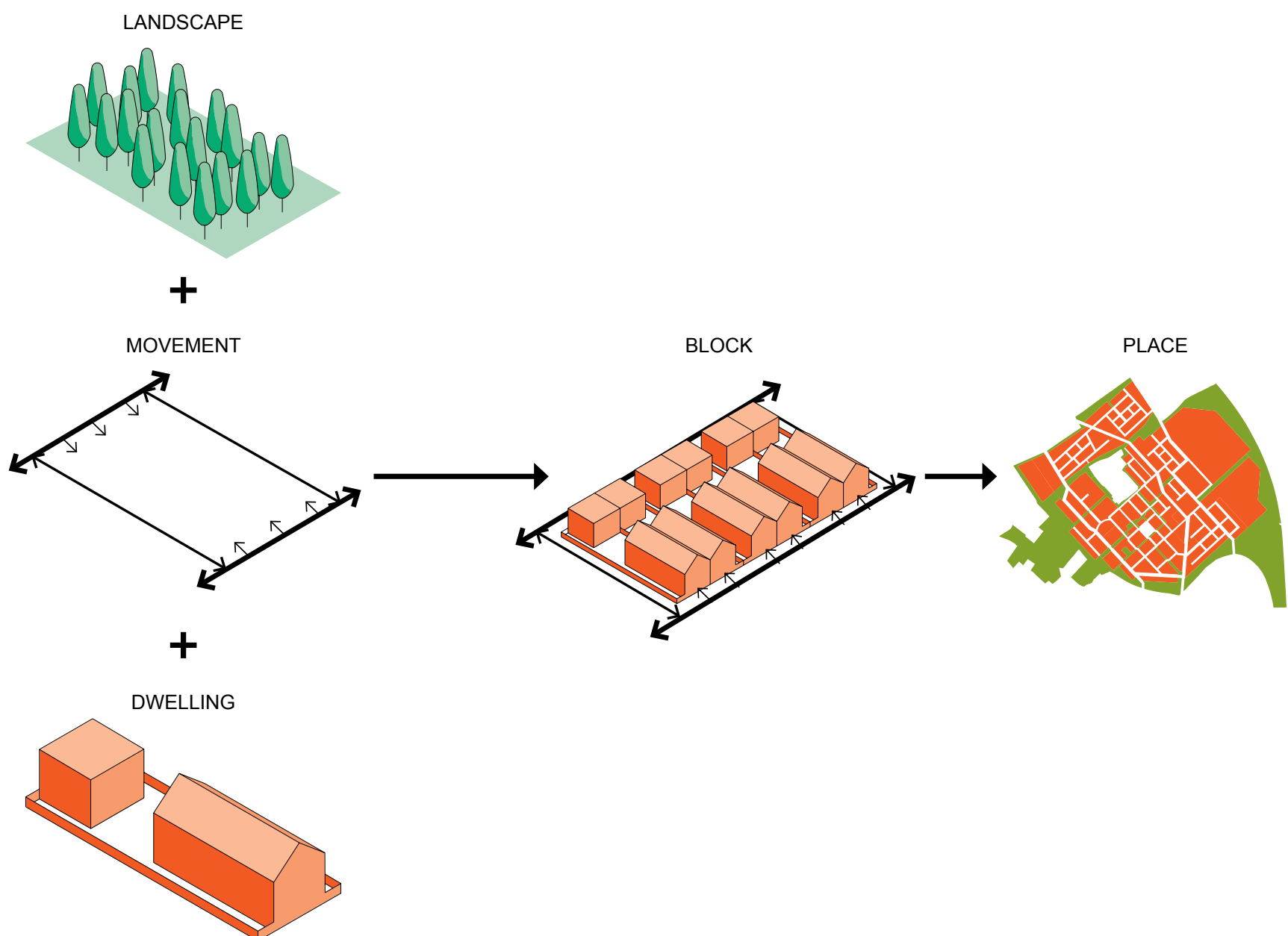
MOVEMENT STRUCTURE

All potential connections between Northstowe phases and existing settlements and to the wider countryside are made. The main route is the 'spine route' connecting north to south and the wider CGB. All key destinations are located at prominent sites and aim to be within easy walking and cycling distance from the majority of the Northstowe residents (as set out in the accompanying Transport Assessment).

BUILT STRUCTURE

This is determined by the disposition of supporting amenities and other land uses on which residential areas depend. The proposed employment, education, retail, recreation and community facilities are planned to serve Northstowe and will also be accessible to existing communities.

FIGURE 6.1: INTEGRATION OF LANDSCAPE, MOVEMENT & BUILT FORM TO CREATE A DISTINCTIVE PLACE



The proposals are underpinned by the following design principles:

- Integrated landscape;
- Environmentally optimised grid;
- Confident edge;
- Eccentricities of the site;
- Open space;
- Dual access;
- Establishing critical distance & finer urban grain;
- Integration of car parking;
- Well defined built edges.

■ CONFIDENT EDGE

Configuring a confident edge to the landscape will ensure that the built extent of Phase 2 is clearly defined and ensures the correct green separation between the new and existing communities. The confident edge is intended to regulate the necessary spatial permeability to ensure public access to the open land uses of the green separation. The design allows for housing frontages up to a maximum of six dwellings units in order to achieve this.



■ INTEGRATED LANDSCAPE

One of the main place-making principles for Phase 2 is the seamless integration of the landscape, of the site's ecology and hydrology, in the urban layout of the main Phase 2 development area. Landscape is proposed to act as one of the main structuring elements of Phase 2, rendering a multi-functional space for connectivity, play, leisure, health, food production, and learning.



■ ENVIRONMENTALLY OPTIMISED GRID

The layout is also derived from establishing a grid layout for Phase 2 that originates from the existing grid orientation of the former barracks, that respects the location of existing hedgerows, and that evokes the linearity of the fen landscape. The grid structure will ensure the integration of historical and natural features.

The north-west / south-east orientation of the grid will ensure that dwellings are protected from prevailing winds and oriented for maximum sunlight throughout the year.



■ ECCENTRICITIES OF THE SITE

The site's existing unique historic features, originating from the former barracks site, help inform the character of Phase 2 and help define historical elements into the urban and landscape grain of the development.

The application of a 'grid rule' to the block layout of Phase 2, especially when this grid meets the dedicated busway and primary road alignments, will generate 'spatial exceptions' throughout the site configuring particular spaces to support the effective circulation, gathering, and orientation of residents and visitors.





■ HOUSING DESIGN PRINCIPLES

There are several principles underpinning the residential design relating to dwellings as detailed below and in the Figure 6.2.

Articulating open space

- Clearly defined ownership for public, private and semi-private amenity space to plots.
- Provide a range of garden spaces, appropriate to the size and location of dwellings.
- Defining the street edge and transition spaces to homes, considering arrival, parking, refuse and cover (e.g. porches).

Multi-layered Space

- Tighter dwelling plots (e.g. townhouses and mews) can provide opportunities for roof terraces and enclosed private courtyards to provide amenity space.
- Provision of roof terraces and courtyards can be coupled with larger community external amenity areas, with dwellings arranged around them or as part of the street and landscape.
- Apartment blocks and mixed-use blocks can make use of upper floor roofs for shared amenity space allowing for larger ground floor uses and undercroft parking.

Dual Access

Individual dwelling plots can have dual access to provide:

- A hierarchy of street types (primary and secondary roads, mews and active frontages to green areas).
- Provide opportunities for a mix of dwelling types (e.g. family homes with integrated or separate mews houses to the rear).
- Potential to phase the development of blocks, such as the provision of dwellings to primary roads with a defined front and subsequent mews developments at a later date.

Critical Distances

- Dwellings will be laid out to meet facing distance requirements of a minimum of 25m.
- Integrating courtyard-dwellings provides opportunities for dwellings to have a varied arrangement of layouts and potentially greater density.

Integrated Car Park

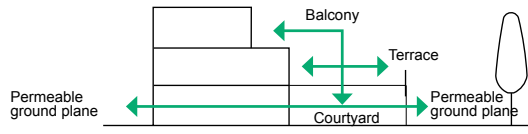
- Individual dwellings to provide off street parking within plots.
- Townhouse dwelling types to be developed to provide parking without requiring all dwellings to have front car drives between pavement and house.
- Mews and raised podiums provide opportunities to remove individual parking access from primary and secondary roads.

Defined Built Edges

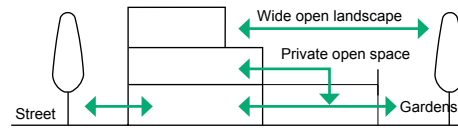
- Dwellings to contribute to defined street edges.
- Placing of dwellings to consider appropriateness of facing types to ensure cohesive street appearances and townscape.
- Breaks and articulations in the built edges provide townscape focal points and opportunities for 'areas of interest' within the street setting
- The heights and pitch of roofs contribute to sense of hierarchy to the various street types and scale of the development.

FIGURE 6.2: HOUSING DESIGN PRINCIPLES

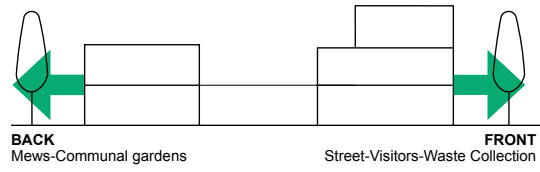
OPEN SPACE



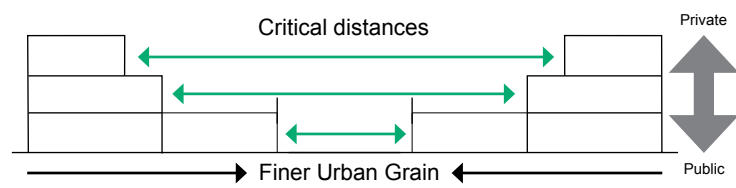
MULTI-LAYERED OPEN SPACE



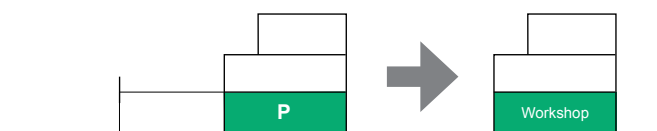
DUAL ACCESS



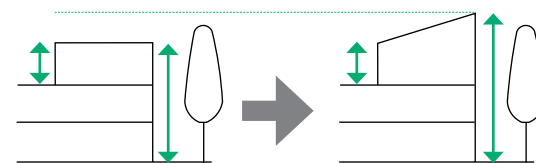
CRITICAL DISTANCES = FINER URBAN GRAIN



INTEGRATED CAR PARK DWELLING ADAPTABILITY



DEFINED BUILT EDGES





■ RESIDENTIAL LAYOUT

Further flexibility in the layout of the development is sought to be achieved by providing homes with both back and front accesses to serve a wide range of purposes. For instance, rear frontages will access mews, secondary roads, communal gardens or private gardens, while main frontages will provide access for visitors, deliveries, and waste collection.

In order to achieve a more compact layout of residential blocks whilst maintaining an appropriate separation between dwellings, a strategic relationship between private and social uses of the dwelling and open space typologies should be established. Social areas of the house on the ground floor can relate to narrow mews or communal gardens whilst private areas of the house can be set back on upper floors to achieve correct critical distances between dwelling units.

Built frontages to streets and the landscape are to be strengthened by the strategic use and orientation of pitched roofs. This will improve the perception and impact of scale in edge areas such as near to Rampton Drift.

■ RESIDENTIAL BLOCK PRINCIPLES

Northstowe Phase 2 will deliver a high-quality residential development through the provision of a well-integrated mix of housing types, tenures and sizes that make best use of higher densities in areas served by a diversity of commercial and community facilities with high levels of public transport accessibility. The variety of housing will meet many different demands and it is anticipated that some of the housing provision in Phase 2 will be high-quality affordable housing.

Integration of car parking in the dwelling plots and spatial adaptability has been considered in the design process with the aim to will provide users with spaces within their homes that can be adapted for other uses in order to respond to a variety of lifestyle choices.

FIGURE 6.3: HOUSING INTERFACES

COURTYARD HOUSING 1



COURTYARD HOUSING 2



TERRACED HOUSING



SEMI-DETACHED HOUSING



DETACHED HOUSING



APARTMENT AND TOWNHOUSE HOUSING



DOMESTIC



BALCONY
ROOF TERRACE
COURTYARD

RESIDENTS



COMMUNAL GARDEN
RAIN GARDEN
MEWS
GREENWAY

TOWN-WIDE



HEDGEROWS
ORCHARDS
ALLOTMENTS
GREEN SEPARATION
SPORTS HUB
TOWN SQUARE

WIDER OPEN SPACE



WETLAND
FENLAND

N 6.2 Amount and uses

Phase 2 of Northstowe will deliver up to 3,500 homes within a high quality environment. It will also include two

- Retail and food and drink;
- Employment uses;
- Health facilities;
- Town square;
- Community meeting space and youth facilities;
- Place of worship;
- Nursury;
- Library.

The proposals include significant levels of formal and informal open space, including the eastern sports hub and completion of the western sports hub, green separation between Longstanton and Northstowe, formal and informal greenways running east-west, and smaller pockets of open space across the development.

The indicative housing mix and dwelling typologies planned for Northstowe Phase 2 are as follows:

FIGURE 6.4: INDICATIVE HOUSING MIX

DWELLING SIZE	NUMBER OF UNITS	% OF DWELLING TYPE (ROUNDED)
1 bed	275	8%
2 bed	858	24.5%
3 bed	1,447	41%
4 bed	832	24%
5 bed	88	2.5%
TOTAL	3,500	100%

■ TOWN CENTRE

Phase 2 delivers the entirety of the town centre. The town centre proposals have been developed and phased in order to serve the whole of Northstowe once completed.

Provision has been made for a variety of uses, including retail, services, cultural, leisure, entertainment, health and community facilities, as well as residential, and employment. Provision is made for approximately 57,500sq.m GIA of town centre floorspace (excluding residential and employment), of which approximately 10,000 sq.m comprises convenience retail and approximately 25,000 sq.m comprises comparison/service retail.

FIGURE 6.5: TOWN CENTRE

TOWN CENTRE USES	Phase 2 Site Area (sq.m)
Total floorspace	78,700
Convenience retail	10,000
Comparison /service retail	25,000
Food and drink	3,500
Employment	21,200
Office	16,200
Light industrial	5,000
Leisure	10,000
Health, community, fitness centre	6,000
Youth facility	2,000
Place of worship	1,000

6.3

N Proposed distribution of uses

RESIDENTIAL

Northstowe Phase 2 will be predominantly a residential development as part of its main landscape features will provide a to deliver up to 3,500 new homes. This new sustainable and vibrant range of valuable habitats and establish diverse ecosystems. community will be served by a mix of land uses connected through a well-planned network of safe streets. The layout of Phase 2 will focus around the town centre with the necessary green and social infrastructure to cater for all Northstowe residents and those of the surrounding communities.

EDUCATION AND RECREATION

Northstowe Phase 2 will deliver a secondary school for the wider community, which is planned to open in time for the September 2018 intake. Two primary schools will also be provided. A second primary school is planned to come forward later in the development, possibly as an alternative use for the Officers' Mess building. All education facilities will have access to sports and cultural facilities.

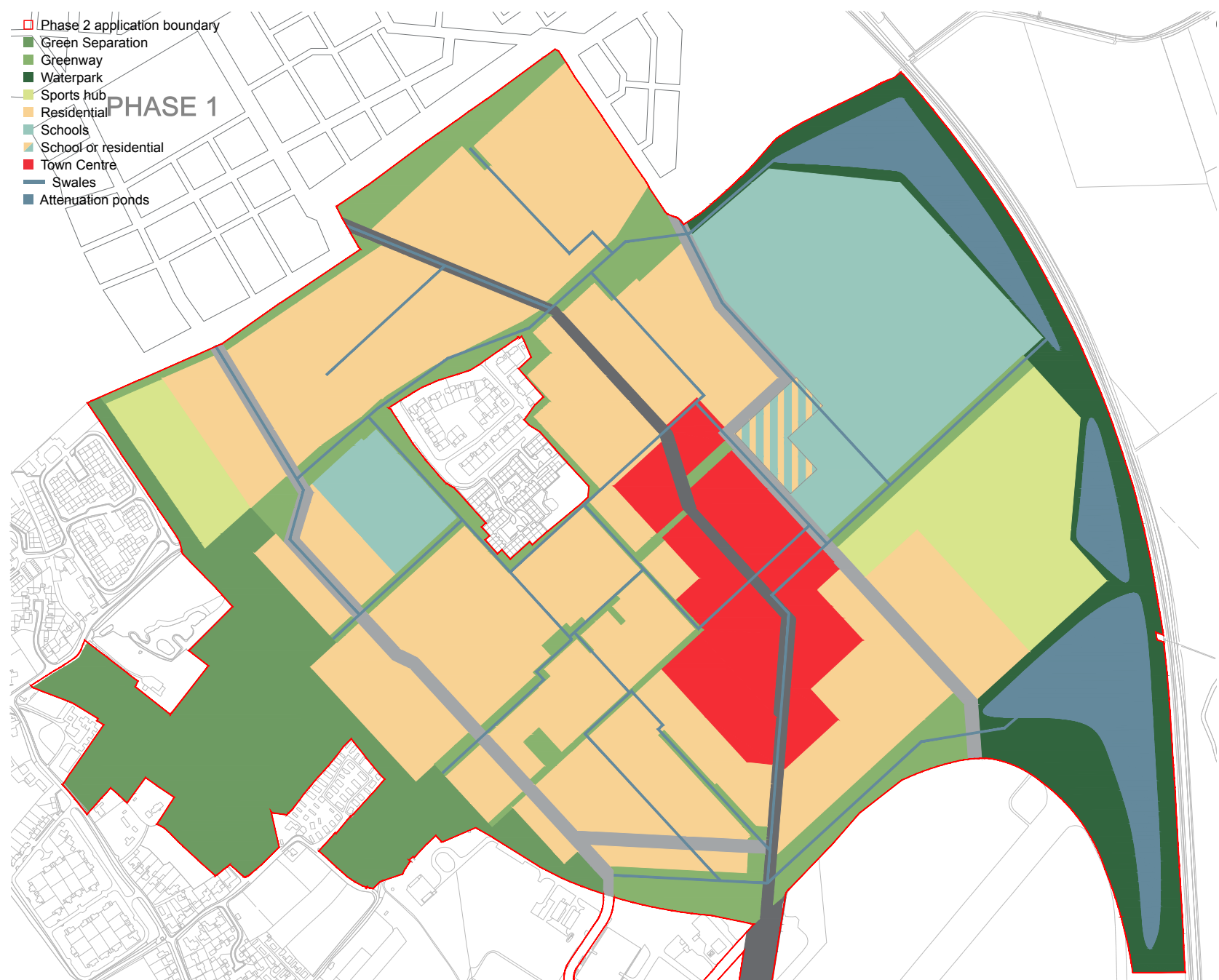
The remainder of the sports hub to the west initiated by Phase 1 will be completed in Phase 2. This is a key recreational element of the green area, around 3,750 net additional FTE jobs within the wider area. It is anticipated that employment gains through commercial development in Northstowe will bring £949.3million in GVA to 2031 across Greater Cambridge.

EMPLOYMENT

Phase 2 will provide a range of employment opportunities and will unlock capacity for 57,500sq.m GIA of town centre uses and an additional 21,200 sq.m GIA of employment space within town centre. Employment within the town centre is likely to consist of a mix of offices, research and development and light industrial uses. The town centre will also deliver employment opportunities associated with its mix of retail, food and drink, health and community uses.

Phase 2 is estimated to bring forward employment space provision with capacity to accommodate 2,100 net additional jobs (new jobs generated) in the Greater Cambridge area. Northstowe is also likely to provide indirect, induced and supply chain jobs; it is estimated that, in the wider area, around 3,750 net additional FTE jobs within the wider area. It is anticipated that employment gains through commercial development in Northstowe will bring £949.3million in GVA to 2031 across Greater Cambridge.

FIGURE 6.6: LAND USE PLAN



TOWN CENTRE

The town centre within Phase 2 will not only be a vibrant, dynamic and diverse centre for local residents but also the heart of the wider community at Northstowe. It will provide shops, services, cultural, leisure and community facilities expected from a small to medium sized market town, which could include:

- Comparison and convenience retail;
- Restaurants / cafes / bars / pubs;
- Residential;
- Workshops;
- Gym;
- Leisure facilities;
- Health, community and fitness centre;
- Youth club;
- Place of worship;
- Outdoor events space;
- Nursery.

The town centre will also serve residents of nearby communities. Its location is planned to make the town centre a convenient destination, maximising its use and accessibility for everyone especially by walking, cycling, and public transport. The layout of the town centre will offer the possibility of evolving as the population of Northstowe grows of over time. The town centre will be one the most important spatial devices to support the creation of Northstowe's identity in the early stages of the development.

A town square is also proposed as one of vital and most distinctive spaces of the town centre, which is to predominantly host community and cultural events. The town square will be a high-quality space designed for everyone to enjoy and will include both built and natural landmarks to create a vibrant place to visit and spend time in.



FIGURE 6.7: INDICATIVE PHOTOS



6.4

N Existing features to be retained

The masterplan design will express the character and history of the area by retaining prominent features of the site including buildings and landscape where a suitable and viable use can be found.

Buildings to be retained:

- The Water Tower;
- Officers' Mess – a Georgian style building surrounded by dense planting with main access from an avenue of mature lime trees;
- The Guard House;
- Listed pill boxes;
- Part of the former barracks' road layout will be retained, which includes the tree-lined avenue running from Rampton Road to the former administrative building of the barracks site.

Key elements of the existing vegetation around the site, such as high quality mature tree lines, hedges, scrub and woodlands will be retained where possible.

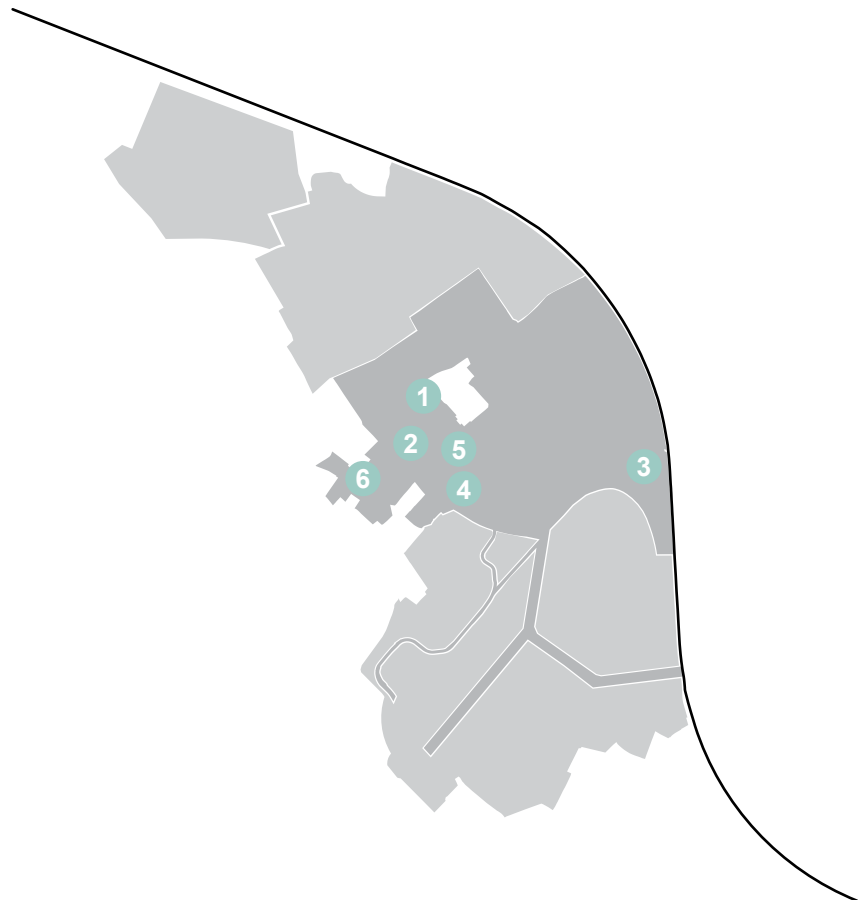


FIGURE 6.8: LANDSCAPE AND OPEN SPACE PLAN

- Phase 2 application boundary
- Green Separation
- Greenway
- Waterpark
- Sports hub
- Retained trees and hedgerows
- LEAP
- NEAP
- Swales
- Attenuation ponds

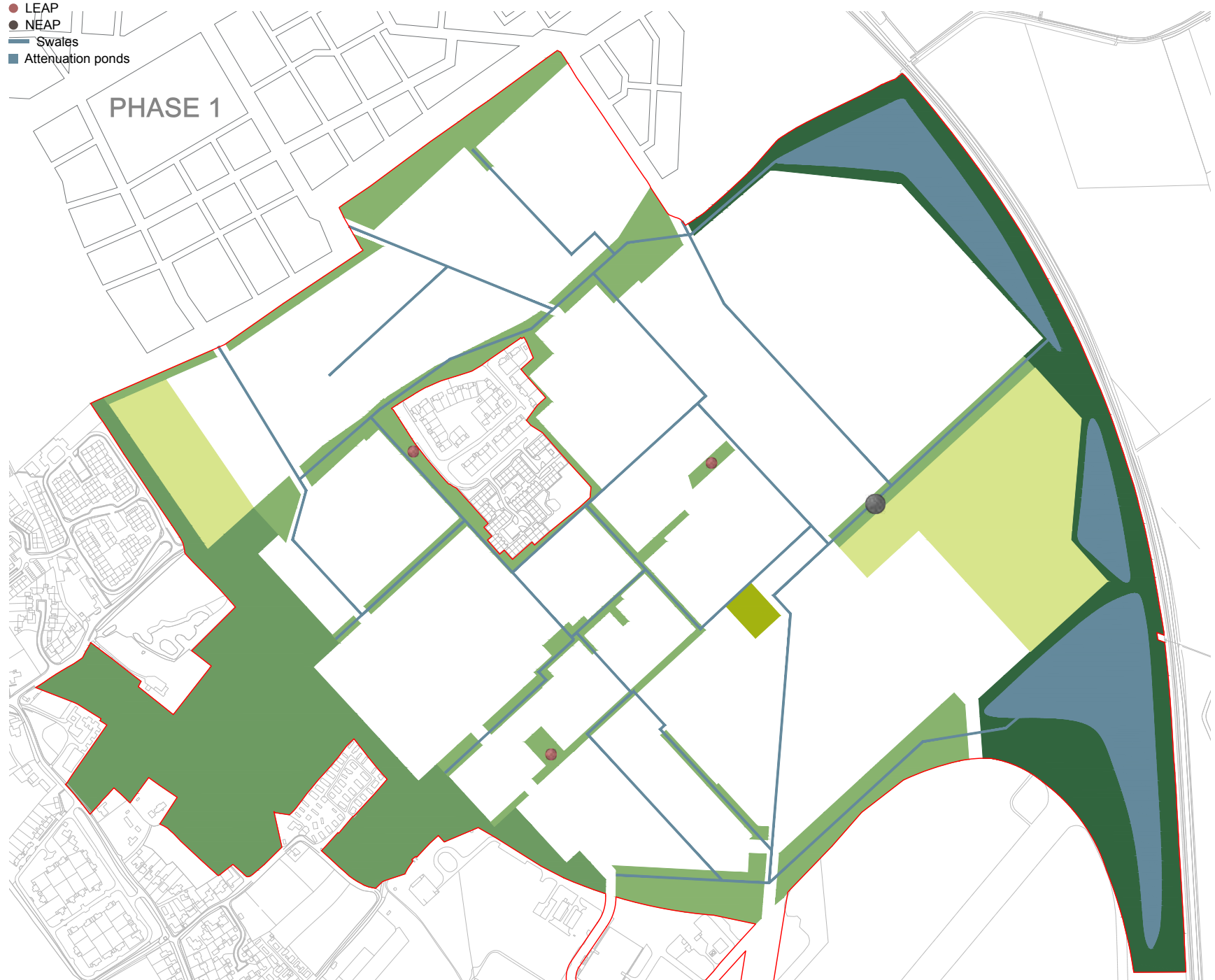


FIGURE 6.9: SITE'S PROMINENT FEATURES TO BE RETAINED



OFFICER'S MESS



FORMAL MATURE TREE LINED AVENUE



OAKINGTON PILLBOX



PROMINENT WATER TOWER



THE GUARD HOUSE



HEDGEROWS