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BELGRAVE VINERY

OUTLINE PLANNING BRIEF



a new neighbourhood for Guernsey



ENVIRONMENT

A STATES OF GUERNSEY GOVERNMENT DEPARTMENT

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Part One

Introduction

Purpose

1.1 Why has this Outline Planning Brief been prepared?

The Belgrave Vinery Housing Target Area is identified in the Urban Area Plan - Review 1 (referred to as the UAP for the purposes of this Brief). This Outline Planning Brief (OPB) sets out the planning framework for the comprehensive development of the Belgrave Vinery Housing Target Area. The OPB interprets the formal policies in the UAP, as they apply to the development of the Housing Target Area. Once adopted, this Brief will be a material consideration in the determination of development proposals for the area. The document will also provide a basis for dialogue between housing providers and the States of Guernsey.

1.2 What does this Brief aim to achieve?

The OPB will aim ***“to ensure that the release of land at Belgrave Vinery is managed on a phased basis and that it is predominantly used to provide affordable and social housing in accordance with targets to be established through the Corporate Housing Programme” (Billet d’État II 2003).***

This document seeks to provide adequate guidance to achieve a high quality built development and landscape that will establish an attractive local identity. The Brief includes some illustrative detail in order to convey general development principles, and to show how new development should be carried out in a manner that integrates with the surrounding area. However, these illustrative details are only included to present a general impression of how a development might appear and should not be taken as binding on a developer who can show good reasons for departing from them.

The development will take place in phases spread over a period of many years. Therefore, the Brief provides detailed guidance whilst not being too prescriptive, or so inflexible that it cannot respond to changing circumstances or new opportunities.



Plate 1: Aerial view of Belgrave Vinery from the east with Les Banques in the foreground



Plate 2: Aerial view of Belgrave Vinery from the north with Vale Road in the foreground

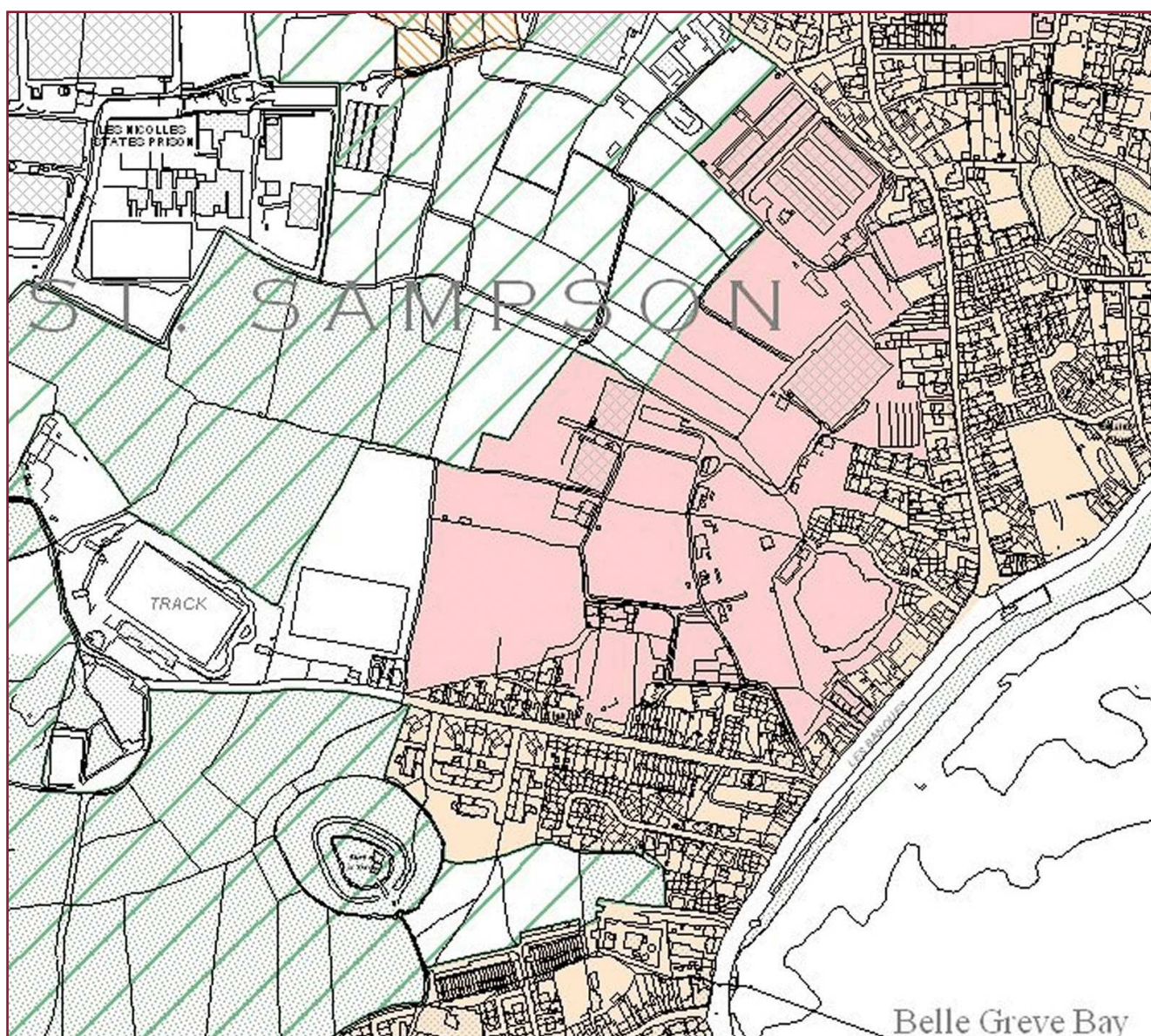


Figure 1

- Housing Target Area
- Settlement Area
- Conservation Area
- Area of Landscape Value
- Sites of Nature Conservation Interest

Extract from the Urban Area Plan

Background

1.3 Planning history

Most of the site has a history of horticultural use comprising the two main horticultural holdings of Belgrave Vinery and Fountain Vinery. The vineries were originally intended to be a land bank for light industrial uses but in response to mounting pressure for further housing development, the use of the land was reconsidered.

A number of reports have been prepared previously to consider the development of the site; a full list of relevant reports is included as an appendix. The land at Belgrave Vinery was first identified as a Housing Target Area in 'The Strategy for the Conservation and Development of the St Peter Port - St Sampson Corridor' (LUC), which was approved by the States in 1989 (Billet d'État, XXV). Since 1990, a series of studies has been undertaken by specialist consultants to identify and assess development constraints and options. The principal findings and conclusions of the studies to date indicate that there are no insurmountable obstacles to the phased development of the site.

1.4 Policy context

This section provides a summary of the main planning policies and planning objectives for the site flowing from the UAP.

The main planning policy relating to the allocation and release of Housing Target Areas is Policy HO8. In accordance with Policy HO8, Housing Target Areas will only be released for housing development, through an Outline Planning Brief, when monitoring indicates that housing is insufficient to satisfy the strategic housing requirement (Policy HO1) or when the Environment Department is so directed by the States. In the case of Belgrave Vinery, it is proposed (Billet d'État II 2003) that the release of each phase of development land would require a States Resolution. In this way, the terms of UAP Policy HO8 will be met.

Based upon the policies of the UAP the following planning objectives for the brief have been identified (with the relevant Policy reference in brackets):

- The use of design and technology to achieve sustainable forms of development will be encouraged (GEN1).
- Individual proposals will have to conform to a comprehensive scheme for the area (GEN2).
- Satisfactory measures for the remediation of contaminated land will be required (GEN10).
- Provision will be made for the retention or the investigation and recording of any archaeological remains (DBE10).
- Distinctive features and characteristics of the locality will be taken into account in the proposals for the site and the appropriate retention of significant landscape features and the provision or improvement of such features will be included as an integral part of the design process (GEN3 GEN6 DBE4 & CO3). The new development should respect the character of the adjoining open land (DBE5).
- The adequacy of roads and services to cope with the increased demand will be assessed and any necessary improvements to the local networks will be identified (GEN7). The Committee will seek to secure safe and convenient access for all people, including the mobility impaired (GEN8). Adequate levels of parking and amenity space will need to be provided (GEN9).
- A public realm strategy will identify the opportunities to create public open spaces and routes within the site (GEN11). The proposals will be required to produce the highest possible townscape quality with appropriate standard of urban design, densities, scale, heights, grain, street patterns, materials and landscaping, without being an inhibitor to innovative and bold architectural styles (DBE1 & DBE2). High buildings (exceeding four/five domestic storeys in height) will only be acceptable, in very exceptional circumstances, where the building can be justified in urban design terms (DBE3).
- The impact on adjoining properties will be assessed in order to ensure that the proposals are not detrimental to the reasonable enjoyment of nearby dwellings (GEN12).
- The proposals will provide predominantly for social and affordable housing. A mixture of dwelling types and sizes including a substantial proportion of homes suitable for smaller households and some sheltered housing will be accommodated (HO11 & HO13).
- Provision will be made for the development of essential community facilities (SCR1).

Relevant car parking standards are set out in Annex 2 of the UAP. Amenity guidelines covering the provision of open spaces are set out in Annex 3.

1.5 The vision

The vision for the development of the Belgrave Vinery site has been informed by:

- Feedback from consultations with key stakeholders and the public;
- An analysis of the site constraints and opportunities as set out in section two; and
- The design and development principles for the site as set out in section three.

This vision is based on the need to create a high quality neighbourhood, that provides a well designed and attractive environment both for residents and visitors. Key design parameters include:

- Open space, landscape and recreation areas for residents that make good use of the site's attributes;
- An efficient movement network that prioritises pedestrians, cyclists and public transport;
- An appropriate urban form that sits well with the surrounding context but that does not copy it.

At this relatively early stage in the detailed project development this vision is expressed through a concept plan (see Figure 10). This concept has been appropriately tested and extracts from this work are included in Appendix 2: illustrative material.



Wetland recreation areas



A network of routes for cyclists and pedestrians



An urban form that blends with its surroundings

Part Two

Site and Area Appraisal

Description

2.1 Site area and location

The total land coverage of the Housing Target Area as designated in the Urban Area Plan is approximately 16.2 hectares (40 acres/98.8 verges). The Housing Target Area is located on the east coast in the parish of St Sampson and just to the north of St Peter Port. Vale Road and Le Murier bound the area to the north, Les Banques to the east and Victoria Avenue to the south.

2.2 Land ownership

The site is predominantly in States' ownership. The States purchased Belgrave and Fountain Vineries in 1985. In 1988 the two fields in the south west corner of HTA8 were ceded to the States Recreation Committee for the purposes of developing football and rugby pitches. Duval vinery on Le Murier, at the western edge of the site, is privately owned. In the middle of the area, two fields in pasture form part of Le Marais Farm. In the south central part of the site, a finger of land in the form of an inverted 'L' is in four private ownerships comprising two dwellings, land and a workshop.



Plate 3: Greenways, Belgrave Lane



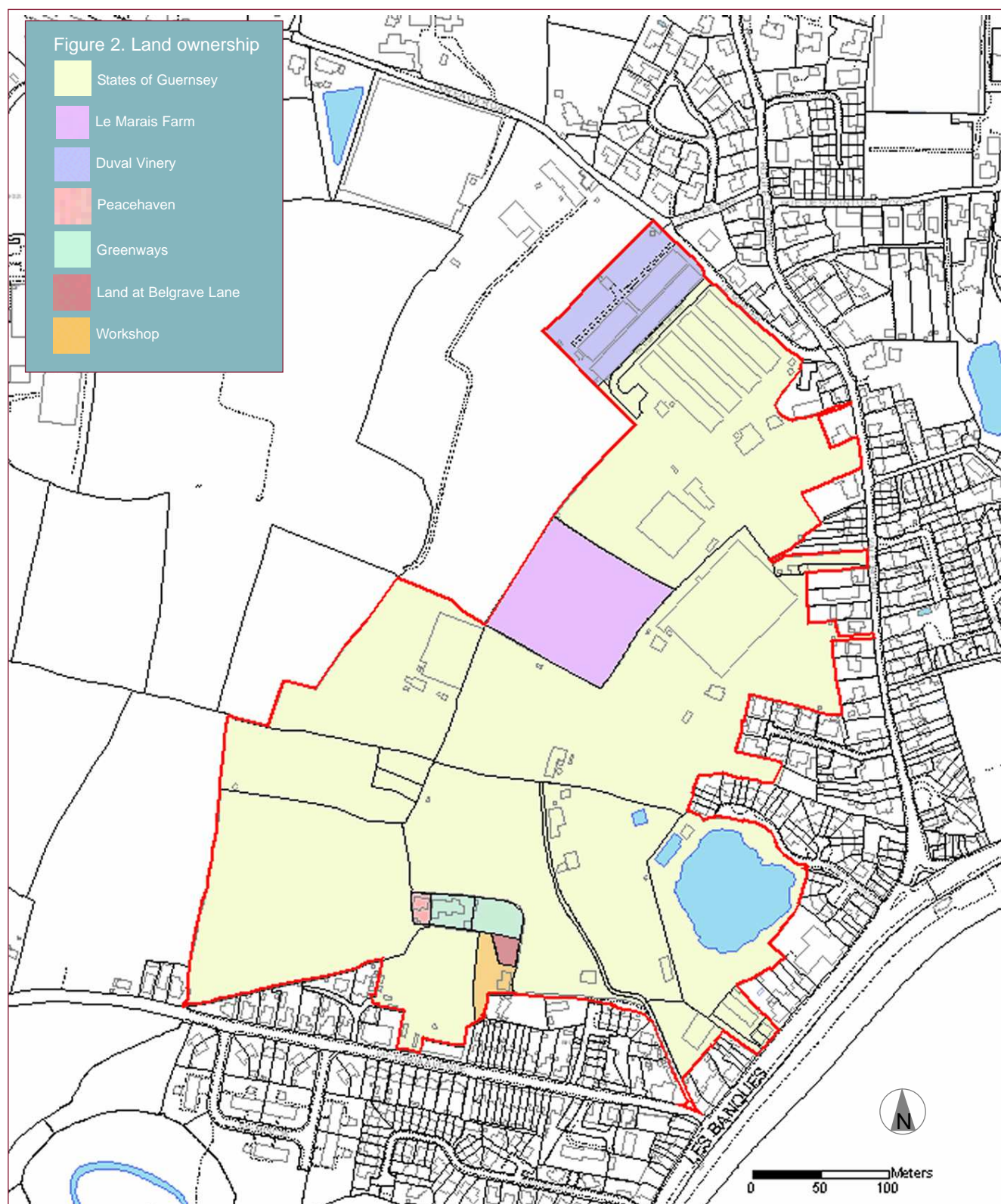
Plate 4: Fields in the south west corner of the site



Plate 5: Les Marais Farm Fields



Plate 6: Southern boundary of Duval Vinery



2.3 The site and surrounding uses

Around the northern, southern and eastern boundaries, Belgrave Vinery is enclosed by primarily residential properties, although there are other small scale uses in the form of offices, workshops, community buildings and shops. To the west lie sports fields and open countryside, a large area of low-lying semi-wetland Marais landscape. Victoria Avenue leads to playing fields adjacent to the south west corner of the site and then to a football stadium and go-kart facility, known as the track, with a ten-pin bowling centre at the western end of the road. To the north west, Les Nicolles prison is situated about 500m away from the site and just to the west of the prison a new school is being developed.

The historical maps in Figure 3 show the past development on the site up to the present day. The area forms part of Le Marais (a marsh), which gives its name to the ancient Chateau nearby. Most of the site was formerly in horticultural use much of

which has now been cleared albeit there remains some greenhouses, supporting infrastructure and buildings. There are two parcels of land which have remained as open grassland. There are also a number of small businesses operating from the site. In addition, in the north central area of the site, a sewage emptying point is served off Le Murier and, to the south of that, a waste transfer station has been located. The access road onto Le Murier is used as an off-road manoeuvring area for driving tests.

The area includes two former quarries. The water filled quarry to the east of the site, known as Barker's Quarry, was used until the turn of the century (Birch, 1982) to extract St. Peter Port Gabbro. Nowadays it is used as a sump before water is discharged to sea. A pumping station is located at the edge of Barker's Quarry. The other disused quarry, known as Stone's Quarry, lies close to Victoria Avenue in the south of the area. This quarry was land-filled with waste material and is known to be generating gases. Its current use is for the storage of States department vehicles.



Plate 7: Adjoining properties in Albion Grove and Rue de la Carriere



Plate 8: Les Marais Farm fields and the waste transfer station



Plate 9: Redundant glass and the waste transfer site



Plate 10: Barker's quarry

Outline Planning Brief

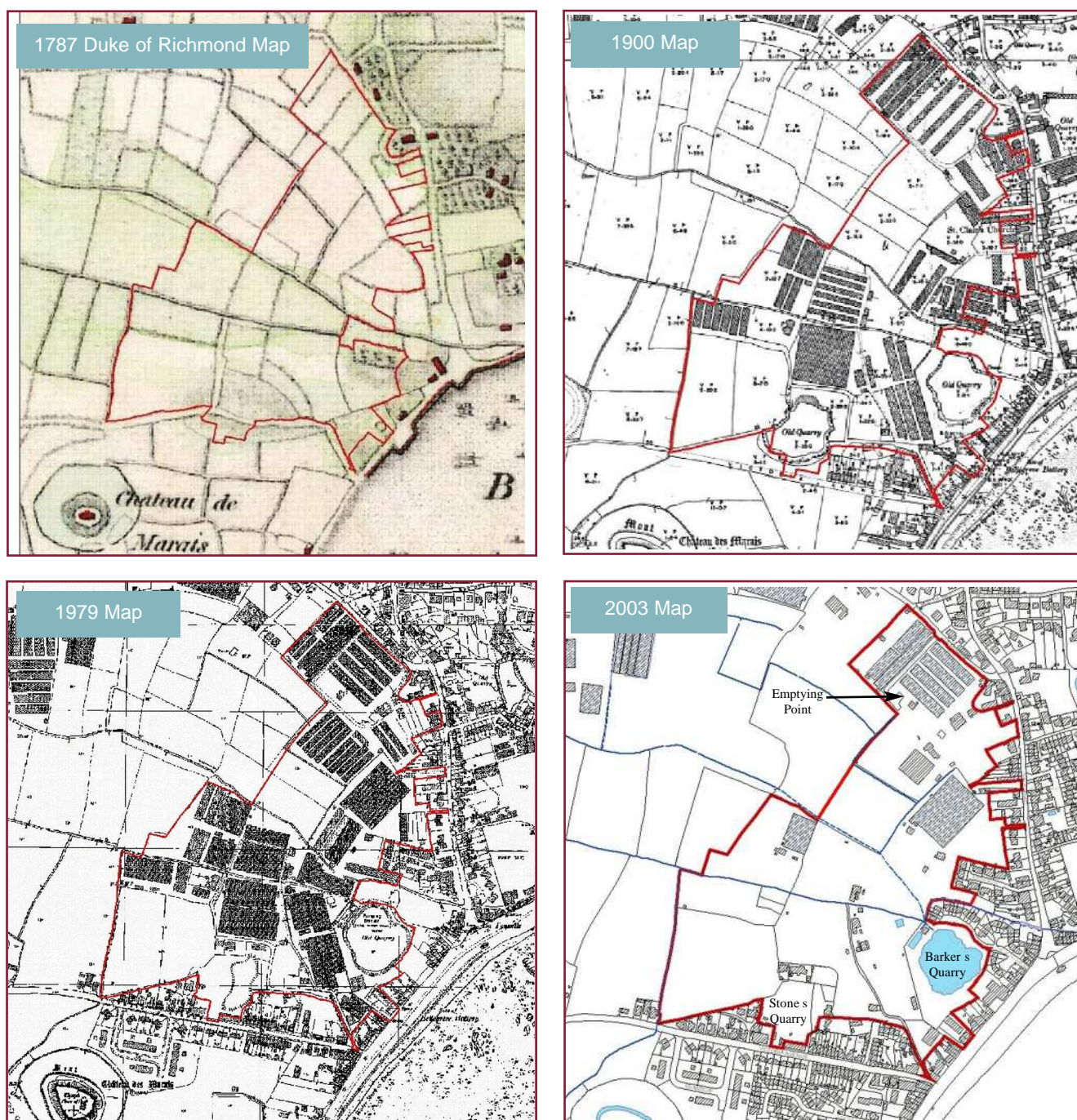


Figure 3. Historical maps

2.4 Topography

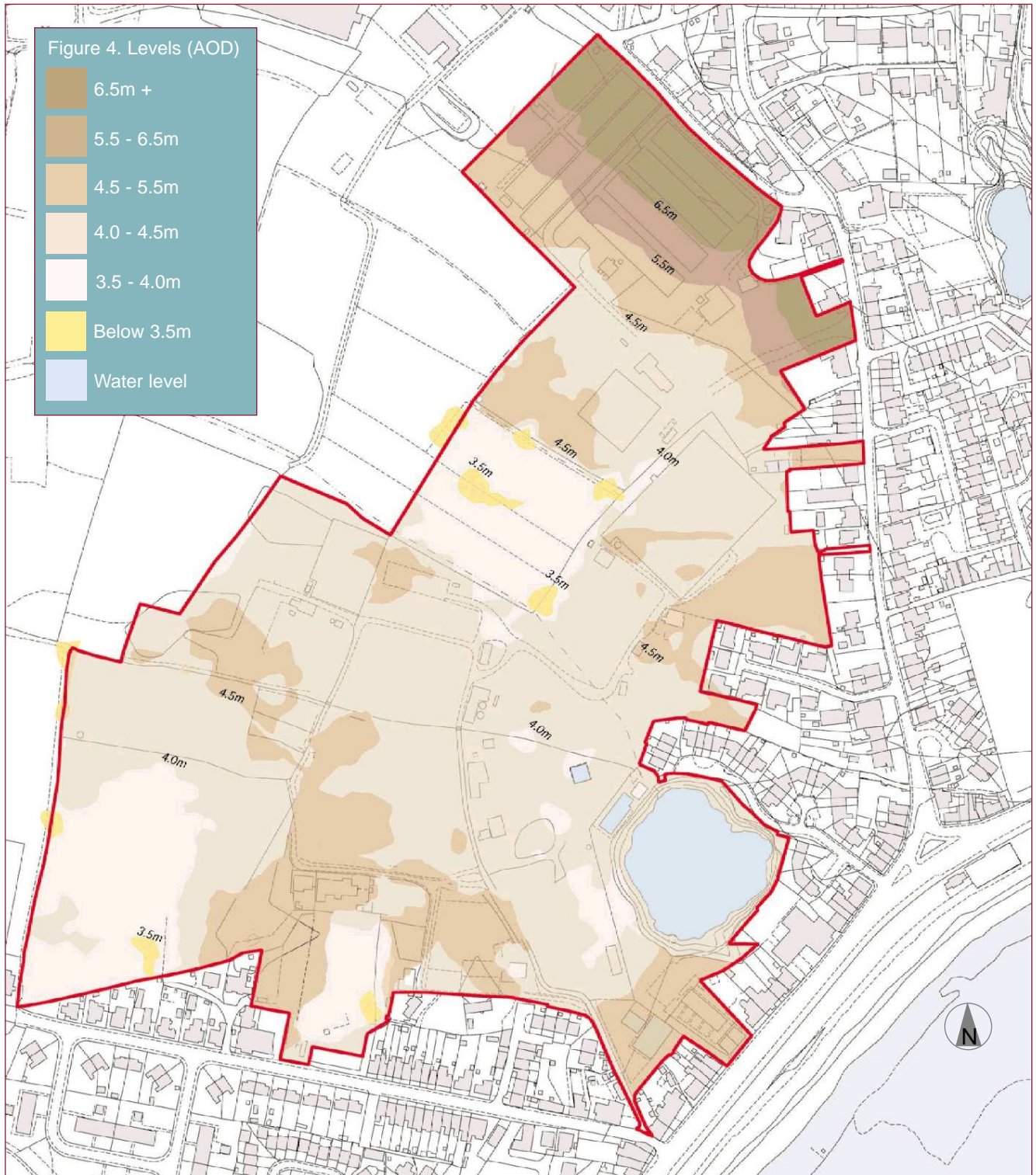
The land is generally level, typically between 3.50m and 4.50m AOD, but rising to a height of 8.00m AOD at the northern end of the site adjacent to Le Murier. Figure 4 indicates the site areas 4.00m and 4.50m above ordnance datum. Only a relatively small area is above 4.50m AOD. These are predominantly in the south central part of the site off Victoria Avenue and in north off Le Murier; there are also other lesser areas including one in the east off Vale Road.



Plate 11: View from Duveaux Road



Plate 12: Looking north across the site



2.5 Natural site drainage and flood risk

Les Nicolles and Le Marais streams dissect the site from west to east. Le Marais stream was modified in the 1960's and involved the construction of a walled open culvert, through the area of Belgrave Vinery, and re-grading. From the site boundary, Les Nicolles stream enters a culvert, which was formed in 1983/84 prior to the construction of the new States' prison. Millbrook drains an area on the northern side of St Peter Port, passes close to Chateau des Marais and joins the Marais stream at the north east corner of the Victoria Avenue sports ground.

The Marais catchment accounts for about 20% of the Island's potable water resources which are pumped up from adjacent to Barker's Quarry to the Longue Hougue Reservoir. Guernsey Water runs the pumping station at Barker's Quarry for the extraction of rain water, whilst the Public Services runs the flood control pumps. There is an incoming piped supply from the Vrangue stream and two supply pipe lines are supplying raw water to Longue Hougue Quarry (or in times of flood, Spur Point) and Baubigny Quarry.

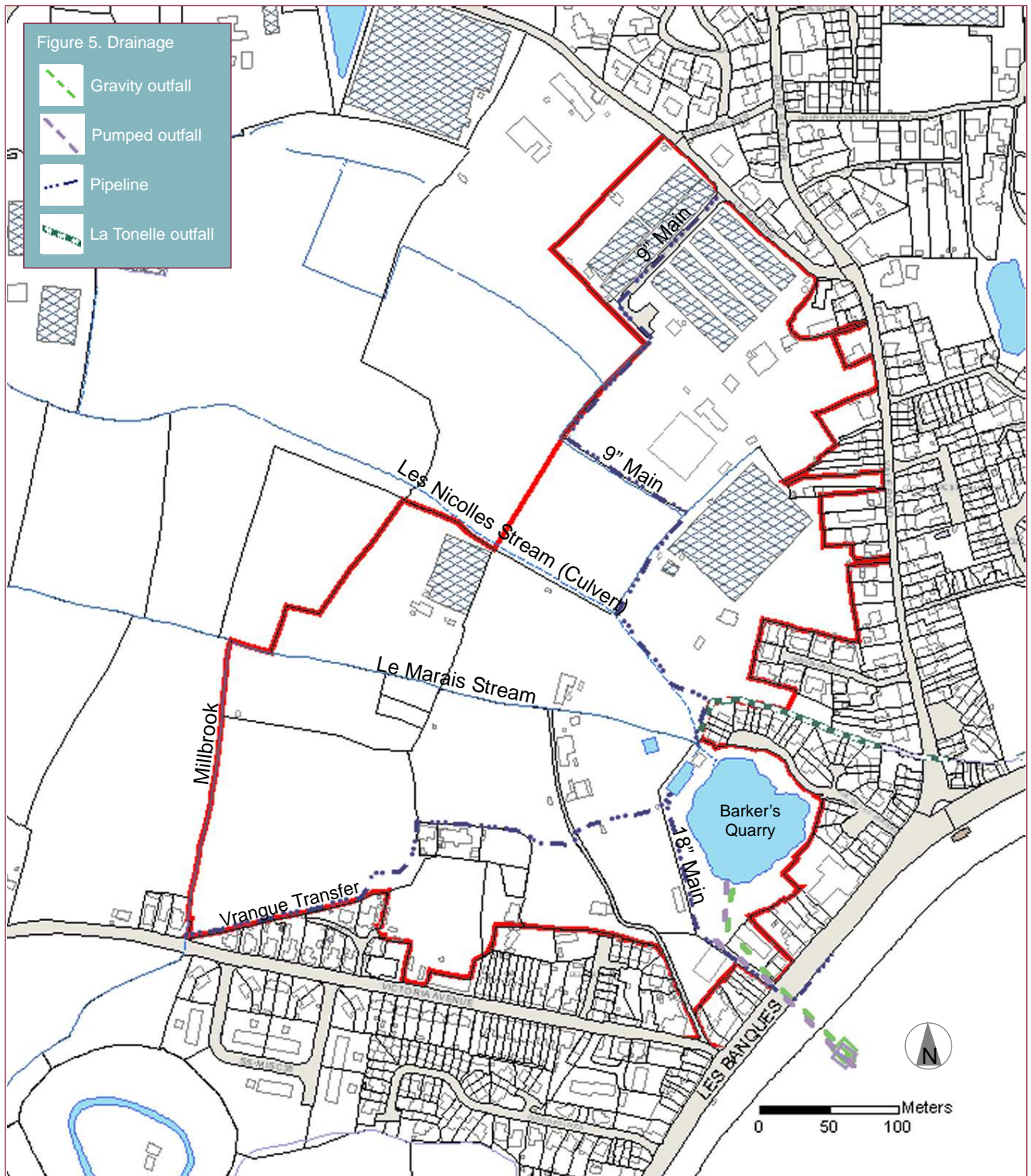
Natural site drainage and the risk of flooding are inherently linked to the topography of the site and the existing levels. A comprehensive study of surface water drainage and water resources for the St Sampson's Marais took place between 1992 and 1995 (Binnie and Partners, 1995). The drainage requirements were reviewed and revalidated in 2001 (Binnie Black and Veatch, 2002) and, more recently, the drainage design was further examined (Black & Veatch, 2004) to take into account the latest climate change scenarios for islands within the British-Irish Council region (UK Met. Office, Hadley Centre, 2003). Clearly, a sustainable drainage and flood management strategy needs to be implemented to protect existing and proposed properties.



Plate 13: Les Nicolles Stream



Plate 14: Le Marais Stream



2.6 Landscape and ecology

The site context is mostly characterised as a Marais landscape and is largely flat, although to the north the land rises up to form part of the northern Hougues landscape. The Marais landscape is essentially a freshwater marshland. Significant parts of Le Marais are semi-natural wetlands and wet meadows, where reeds, flag irises, rushes and wet meadow grass flourish. The only significant areas of woodland in the vicinity are the Rabbit Warren and the Chateau de Marais (Ivy Castle). These both have man-made topographic features which also increases visual and landscape character interest. Native species associated with these woodlands include: Hawthorn (*Crataegus monogyna*); Oak (*Quercus robur*); Sycamore (*Acer pseudoplatanus*); Ash (*Fraxinus excelsior*); and Alder (*Alnus glutinosa*). There are also individuals/small groupings of White Willow (*Salix alba*). Elms (*Ulmus* spp.) have suffered extensive dieback due to Dutch Elm Disease.

The Marais retains much of its original character due to its historic field pattern. Field sizes are generally small. The field parcels are open grassland, with some having diverse swards. Distinctive boundary treatments are boulder and earth enclosures, hedgerows and stone walls. Hedgerows are common along field boundaries. The predominant species are Blackthorn (*Prunus spinosa*) and Sallow (*Salix cinerea*). Individual or small groups of trees occur, including White Willow (*Salix alba*) and occasionally Pine (*Pinus* spp.), located to the west of the sports pitches. Stone walls are predominantly along the roads but are also found as rear garden walls.

Although localised flooding occasionally still occurs, the area has been progressively drained to farm the land. Many of the stream channels within Le Marais have been heavily modified from their natural state. They have been straightened and lined with blockwork and/or concrete. Some sections are virtually rectangular, with both walls

near-vertical, whilst others have one wall near-vertical and the other sloping at 45°. These alterations have inevitably caused the watercourses to appear artificial and less in keeping with the surroundings. Field boundaries and vegetated banks associated with Le Marais and Les Nicolles streams support a range of aquatic and wetland plant species.

The site has a number of positive landscape features including hedgerows, the water filled quarry and the streams. Hedgerows are mostly located along the western boundary, in the southern portion of the site and bounding the fields forming part of Le Marais Farm. They range in quality from species-rich to species-poor and are predominantly tree-less. Barker's Quarry is a large feature on the site, approximately 70 metres in diameter. There is a substantial belt of vegetation around the outer edge, so the quarry cannot be easily seen. The best views are from the south and east. The Marais stream is the most significant water course within the site boundary.

Much of the Belgrave Vinery site supports a ruderal sward and habitat with much bare ground that is suitable for a wide variety of invertebrates. However, there is an abundance of similar habitat nearby and therefore its occurrence within the site is diminished in value.

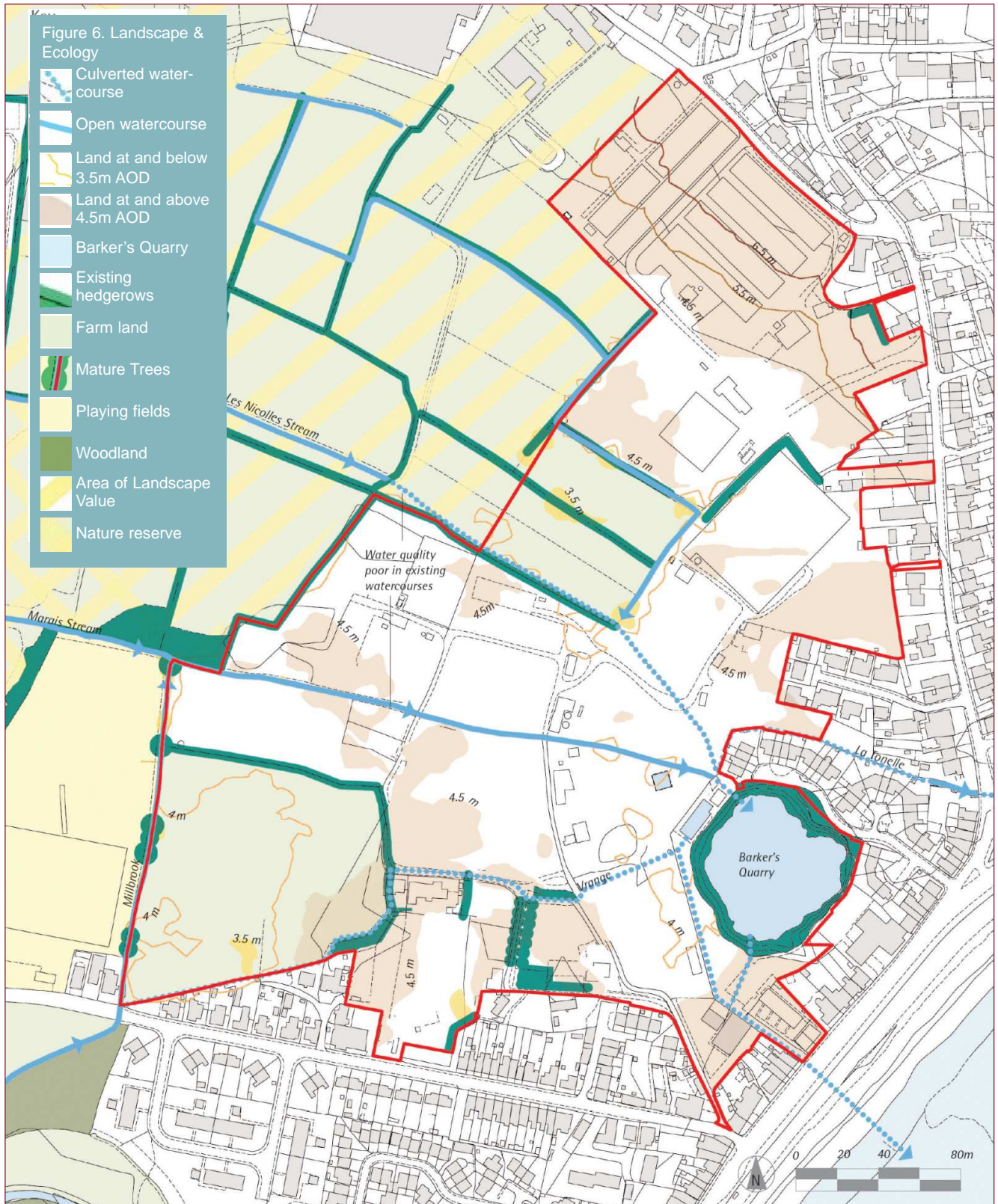
The south-westernmost field in the site is currently semi-improved pasture. This is a habitat type that makes up only c. 5.5% of the island's un-built area or just under 14% of the total grassland habitat on the island. The field's value is also related to a varied hydrological status and its dense hedge boundaries. From time to time the western half of the field becomes flooded. Good hedge banks, including a good number of tree/shrubs surround the field on four sides. The field appears to have been relatively undisturbed for at least 200 years - presumably because it is too low-lying and prone to flooding. Accordingly the original soil and seed bank/composition are still quite possibly present. This is critical in ecological terms and gives this field greater potential value than others on site.



Plate 15: Field boundary



Plate 16: Semi-improved grassland



2.7 Historic environment and archaeology

There is a significant amount of archaeological and historical interest within Le Marais, going back to the menhirs, or standing stones, of which there are several in the area. The Chateau des Marais, is perhaps the most documented site, with a history spanning from before the Bronze Age to the German occupation. Le Chateau des Marais dates from the 12th century. Previous excavations have uncovered prehistoric artefacts. The medieval rabbit warren (garenne) south-west of the site further supports the proposition that the Marais was a focus of activity.

The site contains no scheduled ancient monuments. However, the two channels that cross the site (Les Nicolles stream and Le Marais stream) are part of a network of drainage conduits dating back to the medieval period, and as such their examination with a view to discovering their age and recording their construction would be of great value.

The Marais (marsh) conditions mean that although the land has been drained since the medieval period, the soils are frequently wet. Wet soils are of special archaeological interest as they preserve organic matter, allowing artefacts of wood or other organic materials to be preserved for several thousand years.

In July 2001, exploratory archaeological investigations in the south west field provided prehistoric finds, including the top portion of a fine flint spear point and shards of pottery. A prehistoric gulley was also found in the trial trench, running for several metres. A small standing stone located in the northwest corner of the field was also examined. The prehistoric land surface was located at a depth of approximately 1.2 metres below the present land surface, indicating that the stone was erected during the Bronze Age (c. 1800 BC).



Plate 20: Standing stone



Plate 21: Standing stone



Plate 22: Chateau des Marais



2.8 Access

Vale Road and Les Banques are part of the main distributor road network. Les Banques and Vale Road meet at a junction known as the Halfway, which is currently controlled by a filter. Vale Road is generally 4.5m – 5m wide and has a continuous footway along its eastern side. Les Banques is generally some 11m wide, with a footway on the seaward side and a dedicated cycle route running from Richmond Corner to La Salerie. Les Banques is one of the busiest roads in Guernsey. There is peak period morning congestion on Vale Road with the afternoon peak causing problems at the Red Lion roundabout further to the south.

Victoria Avenue is generally 6m wide with footways on both sides. However, it is narrower, with no footways, at its junction with Les Banques. Access and egress to Victoria Avenue is difficult at peak times and is unsafe for pedestrians and cyclists due to the narrow width between properties, a situation which is unlikely to be improved. Traffic on Victoria Avenue has increased recently due to construction of a new leisure complex near the football ground. Victoria Avenue is considered to be inadequate to serve new housing development.

Figure 8 shows the existing access points into the site. The waste transfer station is accessed from Vale Road. The access road from Le Murier serves the sewage emptying point. The private dwellings and workshop are accessed from Victoria Avenue via Belgrave Lane. Existing rights of way and/or access along Belgrave Lane will be neither extinguished nor interfered with. Access to the pumping station is gained via the road adjacent to the Belgrave Flats. The yard area on Stone's Quarry is accessed from Victoria Avenue.



Plate 23: Le Murier access

There is a lack of pavements around the northern edge of the site along Le Murier and at the junction with Vale Road. To the north of the property known as Fountain Lodge there is an existing pedestrian link to Vale Road. There is also an opportunity to link to Le Murier enabling pedestrians and cyclists to avoid the busy traffic light controlled junction. Further south another entrance to the site affords potential for pedestrian access.

Many of the other roads around the site are too narrow to provide a safe cycle route. The development of this site has the opportunity to offer a safe and dedicated route for cyclists.

Several regular bus services pass near to the site. It is intended that bus services should pass through the site, so as to further encourage their use.

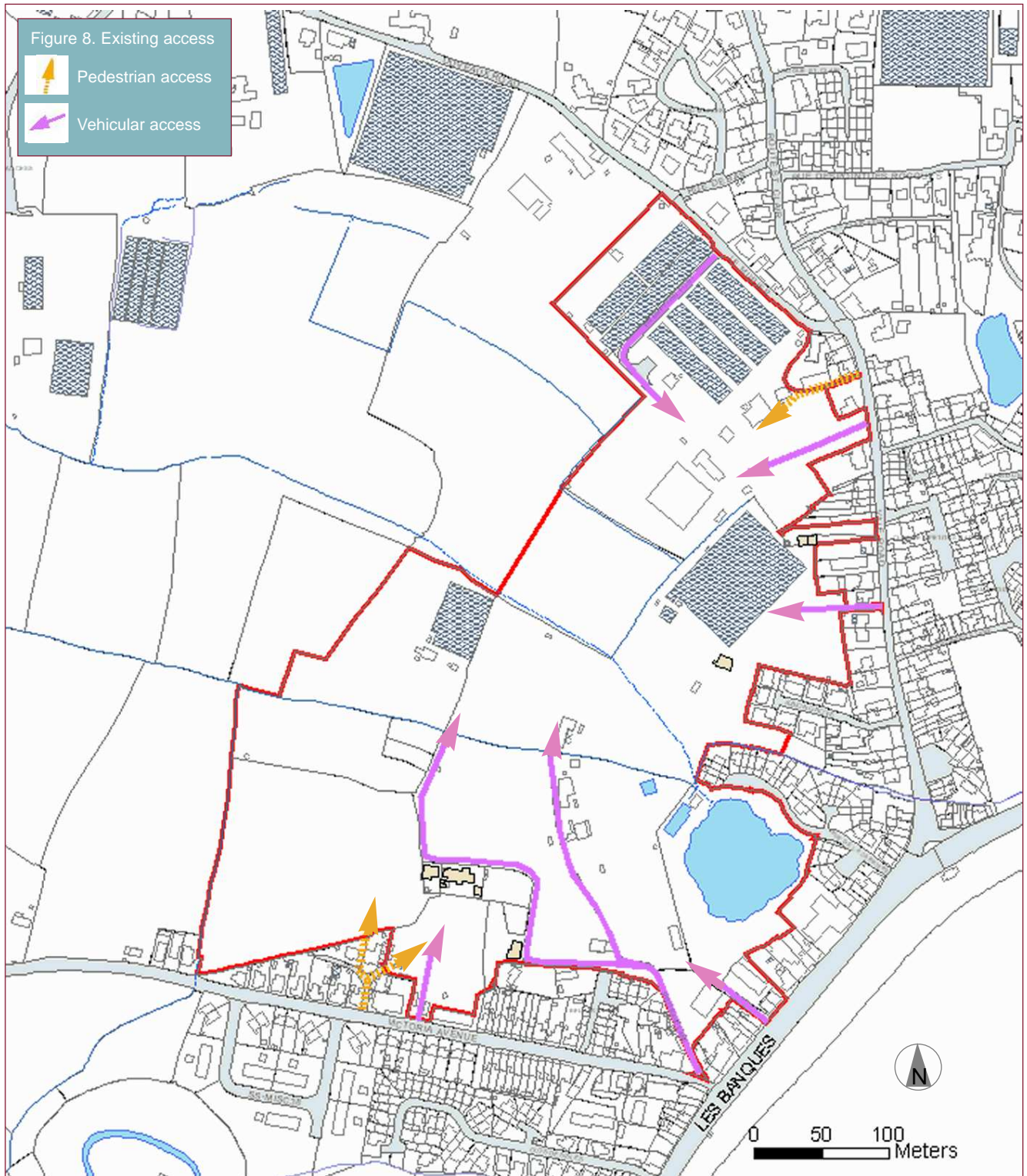
A detailed traffic study of access to Belgrave Vinery was undertaken by Arup. This recent study sets out an access and movement strategy for the site. It provides a review of an earlier draft access strategy and presents preliminary designs for a number of main access points.



Plate 24: Les Banques access



Plate 25: Vale Road access



2.9 Views

The low-lying nature of the site means that it is largely concealed from view by the surrounding frontage development. The northern edge of the site is situated on higher ground, but existing boundary treatments and glasshouses restrict views across the site. Probably the best view across the site can be gained from St Clair Hill. A number of the adjoining properties in Vale Road, Les Banques, Belgrave Lane and Victoria Avenue have rear views of the site. Most views from within the site are of the higher land to the north and south, adjacent buildings, boundary treatments and features of the site's horticultural past such as water towers and chimneys.



Plate 26: Adjacent buildings



Plate 27: View across Barker's Quarry from Belgrave Flats



Plate 28: View from St Clair Hill

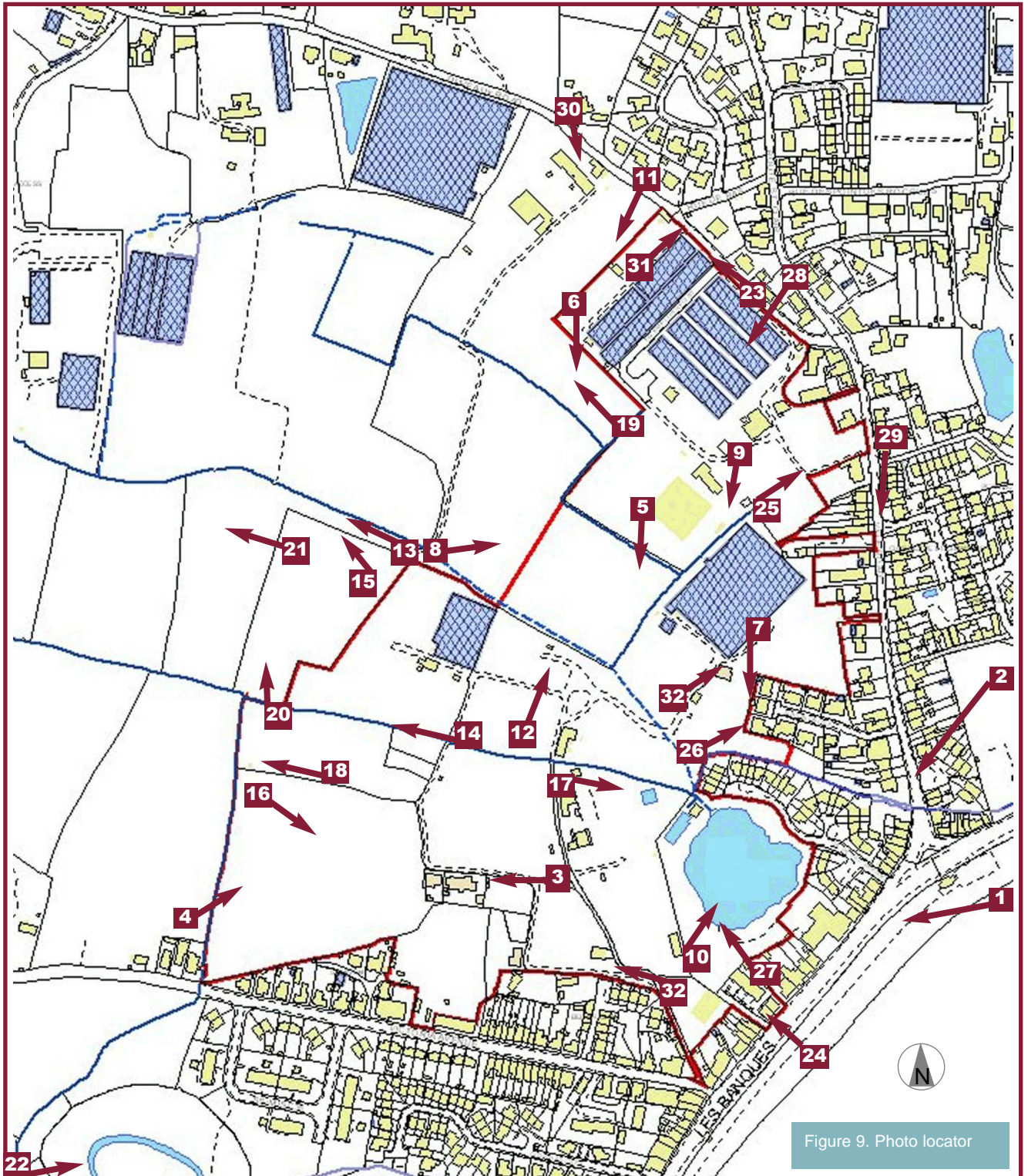


Figure 9. Photo locator

2.10 Built form

A fairly continuous belt of ribbon development backs onto the site along its northern, eastern and southern boundaries.

The buildings around the site are generally one and a half to two storeys, although some taller buildings (around three storeys) are located along Les Banques. In general, storey heights are quite variable and adjoining buildings do not necessarily share ridge or eaves lines. Building and roof forms are mainly simple and unfussy, although dormer windows are a common feature.

To the north and west of the site, buildings are generally larger and more often detached. Otherwise, buildings are frequently grouped together into short terraces of 4-6 properties, with some detached and semi-detached properties. This gives a strong sense of enclosure to the surrounding streets. Entrances to roads and clos are narrow and contain views. Where there are changes in topography or curves in the street the buildings 'hug' the edges of the street. This contributes to the positive urban character.

The predominant building materials are painted render with slate or pan-tile roofs. The consistency, simplicity and robustness of building materials gives continuity and harmony to the character of the built form.

Boundary walls, around the edge of the site and closing the gaps between buildings, are often formed from coursed granite. These contribute to the local distinctiveness of the area. A new granite boundary wall has been formed very successfully around the electricity sub station in the south-east corner of the site.

The character of Victoria Avenue is subtly different from the other main streets around the site. Along much of its length, it is a straight and wide residential avenue with buildings arranged in sequence, east to west, from terraces to semis then detached properties. To the south of Victoria Avenue is an area of States' Housing that is out of keeping with the strong character and pattern of development in the area. Buildings are blocky, regimented and set back from the street with little of the variation present elsewhere.



Plate 29: Vale Road



Plate 30: Le Marais Farm



Plate 31: Granite walls, gateposts and kerbstones



Plate 32: Springfield

2.11 Geotechnical investigations and land contamination

The findings of the geotechnical investigations would suggest that there should be no unusual problems or difficulties encountered with the development of this site.

A preliminary bore-hole survey was carried out by C.J. Associates Ltd in December, 1990, which involved a total of 13 bore-holes (BH) sunk across the site. A phase 2 intrusive site investigation, including thirty three trial pits, was undertaken by Amplus Ltd in January 2004. The findings in the bore-holes and the trial pits confirmed a sequence of topsoil and fill¹ to about 0.6m depth over firm sandy clay and loose to medium dense clayey sand (say 1 or 2 metres thick) above a metre or more thick layer of gravelly sand with typically several metres of stiff or medium dense weathered rock beneath.

Groundwater was encountered at the site at depths of generally less than 1m below ground level.

Note 1: Some fields, which show no sign of previous built development, were not sampled and would probably have shown undisturbed native soil profiles.

The strength of the present sub-grade was measured at nine locations along the proposed main road through the site using in-situ California Bearing Ratio (CBR) tests. The results ranged from 1.2% to 21.0% with an average of 13%. The natural sandy clay and clayey sand can be classified as frost susceptible.

Since 1992, the States Department of Engineering (now Guernsey Technical Services) has been monitoring methane and carbon dioxide emissions in the vicinity of Stone's Quarry from eleven shallow boreholes, one deep borehole and six temporary shallow probes. AEA technology review monitoring data recorded by Guernsey Technical Services. There is potential for landfill gas to migrate from Stone's Quarry and disturbance of the site would be likely to significantly change the gas migratory characteristics of the site. Isolation of the landfill plot from direct housing use is recommended.

Local contamination from heating oil has been identified, but this is unlikely to present a problem beyond normal demolition practices involving the removal of fuel storage facilities and associated buried pipework. There is no evidence of significant hydrocarbon contamination of the groundwater.

The presence of pesticide residues over more than half of the site has been identified as a potential remediation need. The substance which consistently exceeds the guideline value is ppDDT. The locations where the guide value is exceeded are consistent with the footprints of former glasshouses. Construction activity, exposure to the air, geotechnical and flood alleviation measures would all reduce the effective soil concentrations of ppDDT.

No contaminant has been found in sufficient concentrations that would severely attack the material of any new buildings at the site.

The roofs and in some cases the walls of the packing sheds and boiler houses are clad in corrugated asbestos cement. Tests have indicated that the pipework lagging in the old boiler houses, ducting and glasshouses does not contain asbestos fibre. A comprehensive asbestos survey of the site is required.

The need for any remediation is considered in Part 4: Implementation.

2.12 Site summary

- The site is well located between St Sampson and St Peter Port.
- It is in several ownerships but the majority of the site (including access points and infrastructure) is in States ownership and this will mean that at least part of this land will need to be prepared for development in advance of the other sites coming forward.
- The majority of the site is previously developed land and historic maps show greenhouses across most of the site. Current site levels have been raised to reduce flooding over these previous uses.
- The field/boundary pattern across the site is relatively unchanged for at least the last 300 years. It is made up of small fields and some historic boulder and earth enclosures still exist.
- The ground conditions of the site do not appear to present any constraint to development. The former landfill site to the south of the site should be isolated from housing development.
- Parts of the site are contaminated with low risk pesticide residues and asbestos may be present on site. Acceptable methods for dealing with these issues would need to be agreed prior to any development taking place.
- A sewage emptying point is currently located in the north of the site, this would need to be relocated or removed prior to any development of this part of the site.
- Barker's Quarry may be required as a collector for potable water in the future.
- Flood protection measures will be required for the site and to improve the situation for some areas of surrounding existing development.
- The site has a number of positive landscape features in the form of hedgerows, groups of trees.
- The south westerly field on the site is semi-improved pasture and is considered to be of relative importance in Guernsey terms. It has good field boundaries and is currently used for grazing.
- The site is adjacent to an area of landscape value and a nature reserve. Robust boundaries between the two will be required.
- The site contains no scheduled ancient monuments although the streams follow medieval routes and at least one standing stone has been noted. Recording of any finds on the site will be required.
- The current site access points are not suitable for serving a development of this size and there are safety concerns relating to use of both the Vale Road and Victoria Avenue access points. At least one new point of access will be required and there is an opportunity to improve access for the surrounding area for pedestrians, cyclists and public transport.
- The low-lying nature of the site means that there are relatively few views into it, except from adjoining properties. The higher land to the north affords the best view points.
- The built form of the surrounding area is generally characterised by simple buildings in small groups and terraces. To the north buildings are often larger and detached. Painted render in a variety of colours is common, as are coursed granite walls.

Part Three

Development Principles

3.1 Development concepts

A series of development concepts has been formulated in response to the site specific constraints, opportunities and influences identified in section 2.

The key development concepts, as illustrated by the concept layout (figure 10) and as further set out in the site framework, are based on the following principles:

Water resources and flooding

- The provision of flood protection measures to the rear of properties in Victoria Avenue.
- The careful design of water pumping, treatment, bypass channels and other measures to integrate with the surrounding landscape.
- The provision of flood attenuation and storage in appropriate locations within the site and well designed in relation to nearby housing.

Landscape and recreation

- The creation of a new central landscape area that 'extends' the Marais into the site and contains wetland areas to provide flood storage.
- Two new play areas, one in the south and one in the north of the site.
- Landscape used to create a strong 'gateway' into the site from Les Banques and in the area around Barker's Quarry.
- The Marais Stream opened up through the site and re-naturalised to provide a positive environment.
- The majority of the field in the south west of the site to be protected for its ecological value.
- The use of planting and landscape to enhance the new streets and spaces and to define the edges of the development.
- The retention of existing trees, hedges and hedgebanks where possible.

Access

- The provision of a new primary access point from Les Banques.
- The creation of a secondary access point via an improved junction onto Le Murier.

- Provision of a third access from the western part of Victoria Avenue, designed to allow traffic to be one way along the eastern residential section.
- The use of the access onto Vale Road restricted to cyclists, pedestrians and, possibly, buses only.
- The creation of a 'Spine Road' that links all of these access points together and forms the central route through the site.
- The provision of attractive pedestrian friendly environments for the residents.
- The provision of pedestrian and cycle routes both alongside the new roads and as a dedicated leisure route near to the western edge of the site.
- The provision of suitable, attractive and visually permeable, boundary treatments that control access into the Marais.

Urban design

- The creation of a network of streets that is legible, convenient and pleasant to use and well overlooked by housing.
- A strong network of unfolding views and vistas that lead you through the development.
- The use of simple built forms, materials and building placement that updates the distinctive Guernsey character found in the locality.
- The careful siting of car parking that does not dominate the streetscene.
- The creation of two new 'districts' of housing to the north and the south of the site.
- The variation of character areas that respond to their location and site context.

The next section identifies a site framework as a series of layers. The layers of the site framework illustrate how the development concepts should be addressed and how they should relate to one another. The layers are:

- Water resources
- Landscape and recreation
- Access
- Urban design
- Land Use



Site framework

3.2 Water resources

The principal objectives of the water resources strategy are to:

- Allow development to take place, while controlling and mitigating flooding;
- increase the water resources derived from the catchment; and
- protect and enhance the environment.

The water resources layer includes the following elements:

- Raising the minimum level of land for development up to the design flood level using the suitable fill material. The design flood level of 4.64m AOD corresponds to a flood return period in the order of 100 years. The differences in level will ensure adequate drainage of rainwater away from the ground adjacent to houses. Periodic flooding of roads could be expected to occur at an average interval of about 10 years.

It should be stressed that the design return period is the climate change scenario (100-year current flow + 20%). This design event is equivalent to a flood of the order of 200-years return period under current climatic conditions and therefore provides for a higher level of protection now in order to achieve 100-year protection in the future, as climate change takes place.

The required minimum elevations are as follows:

- ⇒ Building ground floor level 4.79m AOD
- ⇒ Ground level adjacent to buildings 4.64m AOD
- ⇒ Footpath kerb level 4.54m AOD
- ⇒ Road gulley level 4.39m AOD
(equivalent to the predicted 1 in 5 yr peak flood level)

⇒ Road centre line 4.48 m AOD
(equivalent to the predicted 1 in 10 yr peak flood level)¹

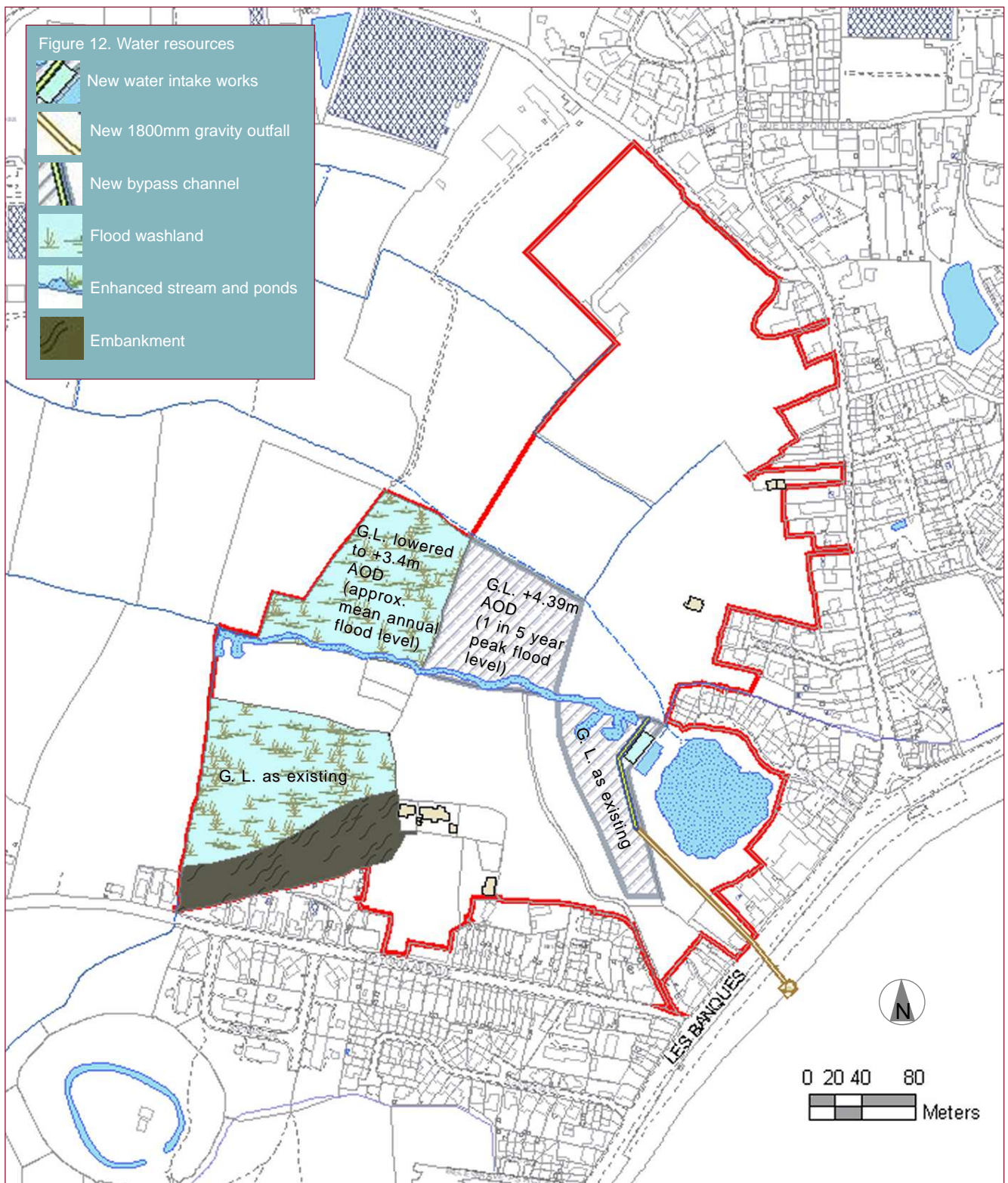
Areas under 'structures' (i.e. buildings, roads, paths, car parks and the like) should be raised with suitable material with compaction and load bearing capacities. Other areas (e.g. gardens) should be raised with material suitable for cultivation. As the site is a main source of water gathering on the Island great care must be taken to avoid importing pollution to the site.

- A flood defence scheme to protect the low-lying residential areas of Victoria Avenue and Clos des Isles. The scheme would include an embankment, with a crest elevation of at least 4.94m AOD (giving a freeboard of 0.30m over the design 100-year flood level of 4.64m AOD). At the western end of Victoria Avenue, minor raising of the highway may be necessary to complete the flood defences of the area.
- Prior to undertaking any development, the provision of a new (1800mm diameter) gravity outfall to the sea. This should be connected directly to the main Marais stream by a new 3.6m wide channel which bypasses Barker's Quarry and the proposed upgraded water supply intake works.
- In the western part of the site, between the Marais and Les Nicolles watercourses, lowering the ground levels and the banks of the Marais stream to create a flood washland, which would act as a spending area and improve the local landscape in the development area. The ground level of this washland must be at or below 3.4m AOD.

Figure 11. Illustrative cross profile



Note 1: assumes a 6m wide road and 1 in 40 camber



3.3 Landscape

Basing the development framework upon an enhanced natural environment is vital to ensuring that existing and new neighbourhoods are attractive places to live. The landscape strategy responds to the landscape character of the Marais and the requirement to accommodate flood attenuation measures. Several important landscape features have influenced the landscape strategy illustrated in Figure 13. These include: the Marais Stream; Barker's Quarry; a number of old hedgerow boundaries and the ecologically and archaeologically important fields in the south western part of the site. In addition to these assets a number of development constraints have been taken into account, including site levels and the landfilled quarry.

The formation of a restored Marais landscape linking through the heart of the site across to and encompassing Barker's Quarry forms the backbone of the landscape strategy. The character of the main open space through the middle of the site will reflect the existing marais landscape to the west of the site. This public amenity area, being bordered by housing, would provide a pleasant outlook for residents. In part of this landscape area access will be restricted to improve the ecology and habitat value. Other parts provide natural areas for walking, cycling and general amenity.

Naturalising the course of the Marais Stream through the site would create new environmentally rich water features whilst considerably improving the carrying capacity of the watercourses. The stream would be enhanced by breaking out the existing culvert channels and creating new cross profiles as shown in Figure 11. If the streams became surcharged in times of peak rainfall the open space would serve as a washland area. The use of large rooted water plants in the stream margins and pond areas would avoid the growth of nuisance algae. At the point of entrance to the site of Millbrook, the Marais Stream and Les Nicolles Stream, treatment wetlands should be constructed for nutrient removal and pollution interception. The target should be to lower phosphorous levels in the water to below 0.05mg/litre. These wetlands should be based on the very latest research and should not be limited to standard reedbed technology. Treatment wetlands should not be on-line and should be designed to maintain summer flows in streams.

This new Marais landscape area extends as a wetland meadow around the south western edge of Barker's Quarry and fringes the main access from Les Banques. The creation of a wetland meadow around

Barker's Quarry forms a natural setting for the quarry, increasing access and visibility and also assisting with flood attenuation. This arrangement offers a pleasant vista of open landscape from the main coast road and reduces the impact of the development.

In the north and south of the site smaller areas of parkland would be provided that are directly accessible to nearby residents. The northern linear space marks the transition between the Marais and Hougues landscapes, softening the impact of the development and bringing a different character to this part of the development. The southern area of open space would be on the former Stone's Quarry. This allows a north-south green lane to be created from Victoria Avenue fringed by open space along its entire length.

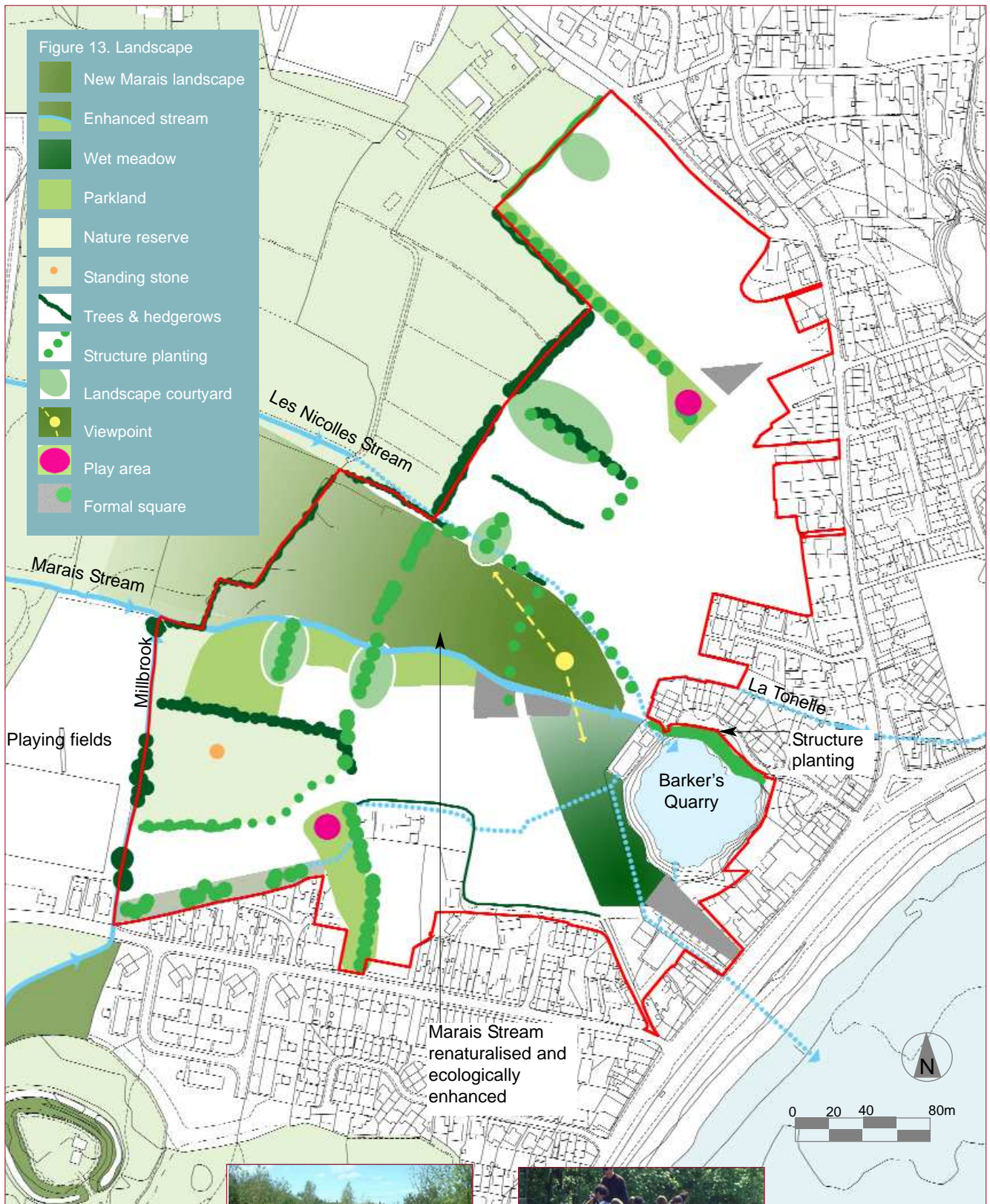
Part of the south western fields will be lost to development because of the need to provide improved access to Victoria Avenue and flood defences for homes in this area. However, a substantial part of these ecologically and archaeologically important fields and the historic hedgerows will be protected. This nature reserve will provide an appropriate setting for the standing stone. As part of the ecological management regime of this area and the western part of the new Marais landscape, flooding will be allowed to occur. Consequently these areas should remain relatively undisturbed and access will be restricted.

Existing and retained trees and hedgerows will be integrated into the development and reinforced with new tree planting and new hedgerows. This would form a strong planting structure for the overall site even though it will be developed as a number of phases. Selective tree planting should be used to add visual interest, enclose or frame key views, and identify junctions or key gateways to a particular neighbourhood. The planting of copses of trees within the public amenity areas would attract resident and migrant bird life.

Landscape dominated residential courtyards will break up the edges of the development and soften the transition between open landscape and built-up areas.



Restored Marais landscape



Stream enhancement



Wetland recreation

3.4 Access

The general intention of the access strategy is to provide a safe and attractive network of residential roads and footpaths, which:

- a) Allow pedestrians and cyclists to move freely about the site and between the site and the surrounding areas;
- b) reduce vehicle speeds and encourage walking and cycling;
- c) enable the site to be served efficiently and effectively by public transport;
- d) facilitate convenient access to individual properties by cars, service and emergency vehicles, whilst ensuring that the environment is not dominated by car access and parking;
- e) restricts extraneous through access by vehicles; and
- f) provides for the development to take place in phases over a period of many years.

Pedestrian and cycle network

The site location offers several opportunities to create pedestrian and cycle links between surrounding areas and the main cycle and bus routes along Les Banques. This enhanced pedestrian and cycle network will provide safe and convenient access for alternatives to the car. The main features of this network are:

- A pedestrian and cycle through route
- A green lane
- The Marais leisure route
- Connecting routes
- A desired safe route to school

The through route will provide key pedestrian and cycle access from Vale Road to the strategic cycle route along Les Banques. Where the route coincides with the primary access road, a segregated cycleway/footway will need to be provided alongside.

The green lane will be provided along the west side of the development and creates an alternative north-south route from Le Murier to Victoria Avenue. It links the northern, central and southern landscape spaces and fringes the open countryside to the west. The route offers long views across the existing and new Marais landscape and a traffic calmed environment.

The Marais nature trail is an informal route for recreational enjoyment of the major open space through the middle of the site. The route provides public access to this space for pedestrians and cyclists to appreciate the Marais landscape and links to the adjoining sports facilities.

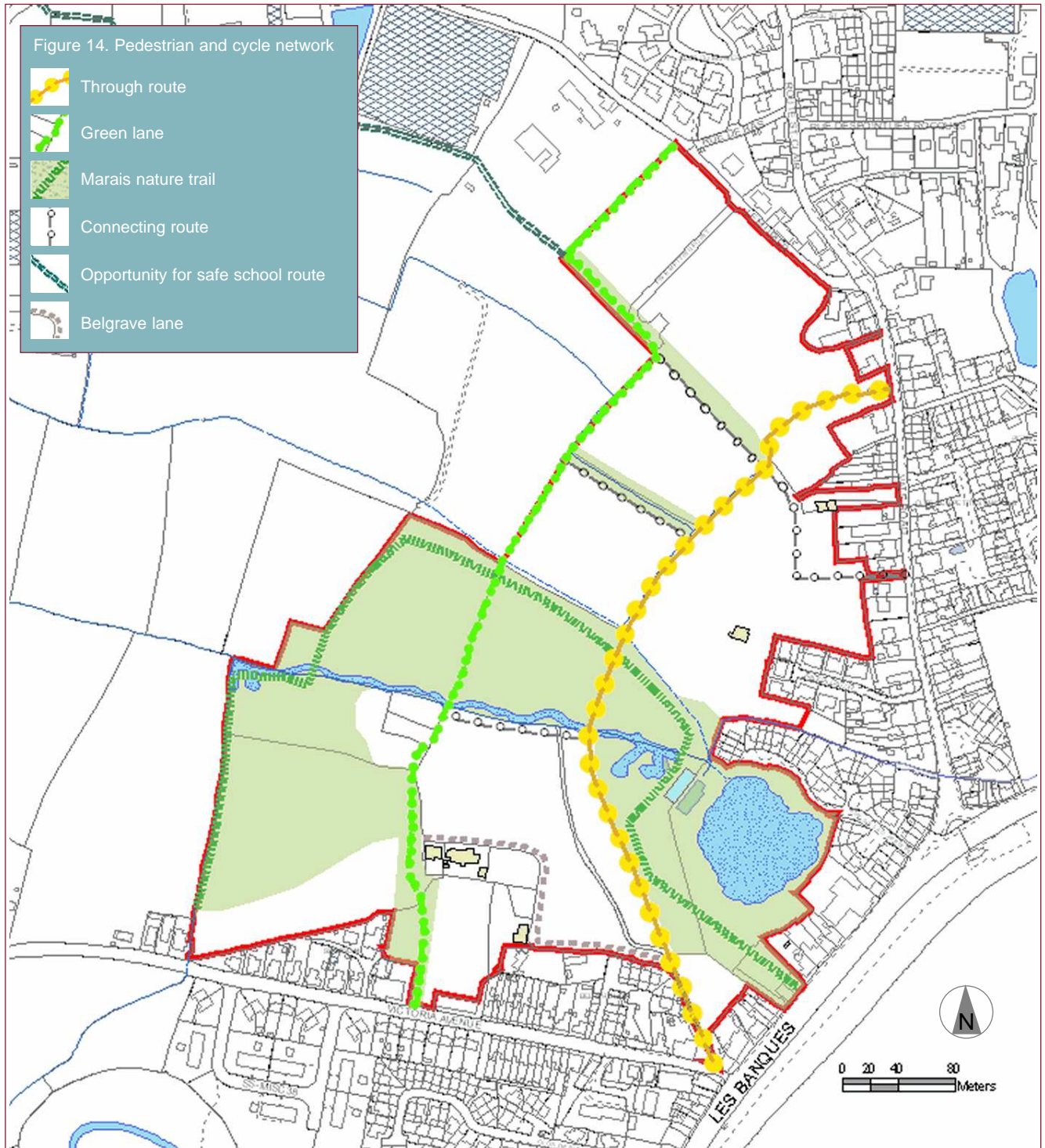
Connecting routes complete the pedestrian and cycle network within the site by providing convenient east-west connections between the green lane and the through route. Belgrave Lane would be retained predominantly for pedestrian and cycle use but with limited vehicular access for residents only.

There is also an acknowledged need to consider how a 'safe route to school' could be provided through and from the site to the new school at Les Nicolles. A potential route has been identified, which would extend the proposed green lane in a westerly direction to the new school site across the intervening farmland. Although, this route is considered to be desirable it could only be achieved with the co-operation and agreement of the private landowners involved. Furthermore, forming a segregated route across open land is not favoured because of the lack of surveillance and concerns about child safety. Instead, traffic calming measures to curb vehicle speeds and to improve safety for pedestrians and cyclists will be designed for Le Murier/ Baubigny. These measures will complement the proposals for traffic calming associated with the development of the new school.

Any segregated footways should be wide enough to allow for pushchairs, prams and wheelchairs.



Marais nature trail



The vehicular network

The existing northern access onto Le Murier is approximately 6.1m wide and is capable of serving the development of the site. Moreover, this access offers the only good access to the site without major works. A simple T-junction is recommended for the junction of the primary access road with Le Murier. The sight line to the left emerging from this access will need improvement. To give a safe access it is important that 4.5m by 70m visibility splays are provided.

The temporary waste haulage access onto Vale Road is unsuitable for car access because visibility at the junction with Vale Road is restricted by the frontage walls of houses either side. Whilst this is not a problem for vehicles with a high driving position, such as buses, emergency services and refuse collection vehicles, it would be a problem for car drivers who have a lower line of vision. Therefore, use of this access should be limited to buses, emergency services, refuse collection vehicles, pedestrians and cyclists.

Access points from the south will also be required. Belgrave Lane leading to Victoria Avenue is poor and unsafe due to the narrow width between properties. In addition, a further constraint is the junction's close proximity to the Victoria Avenue/Les Banques junction which is itself narrow and somewhat constricted. Therefore the existing access is unlikely to be suitable as a means of vehicular access for the purpose of the site's redevelopment.

A primary access point will be provided direct to Les Banques, on land currently occupied by Belgrave Flats - States owned rental housing units, with either a new priority junction or one controlled by traffic signals. Any loss in housing in this location would be re-provided on the site. This new junction can also incorporate signal controlled crossings for pedestrians and cyclists giving safe access to the footway, cycle track and bus stops on the seaward side of Les Banques. The general form of this junction and the planned improvements to the Halfway are shown in Appendix 3. Substantial improvements to the Red Lion junction will be needed to cater for the additional flows. If these improvements are not provided then there will be a considerable increase in congestion. Although, Victoria Avenue is unsuitable as a primary access it would be desirable to provide a secondary access linking the western end of Victoria Avenue to the proposed primary access route. The secondary access link will provide an alternative route to and from the sports and leisure facilities in Victoria Avenue. This would enable traffic along the eastern section of Victoria Avenue to be restricted to one way west bound.

Figure 15 shows the potential access points and an indicative road layout. The primary access points will be from Les Banques and Le Murier, linked by the primary access road. A secondary access road will link to the primary access road from the western end of Victoria Avenue. A network of neighbourhood access ways designed around a grid theme will provide optimum ease of movement, especially for pedestrians and cyclists.

There is a risk that the primary access road will form a 'rat run' for motorists driving between Le Murier and Les Banques. For that reason, and because of its role in serving a major housing area, the primary access road should be traffic calmed with a 20 mph design speed.

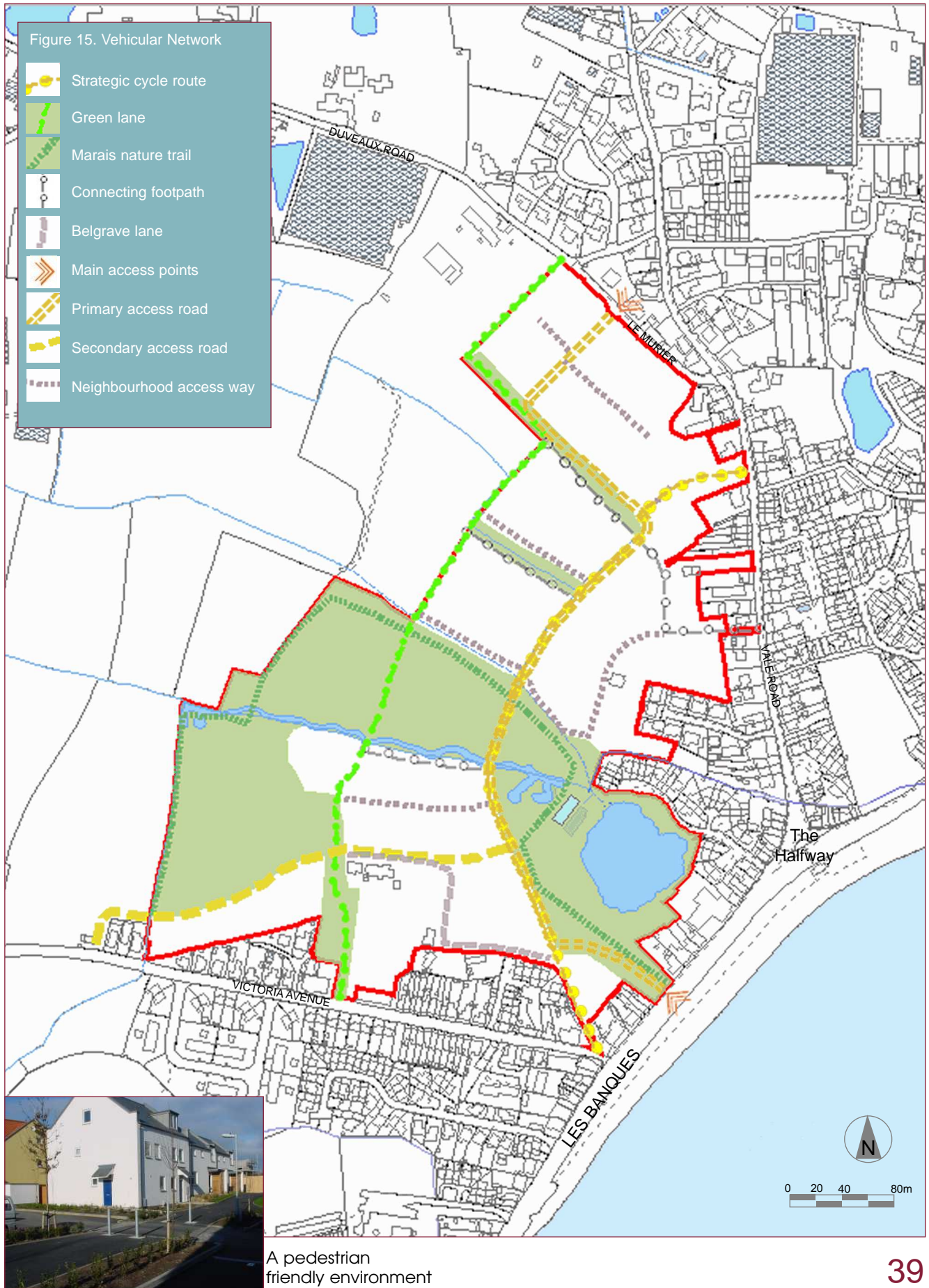
The road layout should be designed to reduce vehicle speeds and encourage walking and cycling.

The road layout should provide access close enough to dwellings for the purpose of refuse collection and emergency services. This normally requires a maximum distance between dwelling and refuse collection vehicle of 30 metres (20 metres is recommended), and facilitating emergency vehicles reaching a point within 45 metres of floors not higher than 6.1 metres, and within 30 metres of floors not higher than 9.1 metres.

The detailed design of access points, roads, footpaths and cycle routes will need to be very carefully considered involving a flexible interpretation of DB32 (Design Bulletin 32, Residential Roads and Footpaths, 2nd edition, 1992), responding to the particular circumstances of the site and its setting to achieve a balance between highway requirements and other factors. Designers are particularly recommended to refer to the DETRs companion guide to DB32 'Places Streets & Movement', 1998. The neighbourhood access ways should be based upon the design guidelines for 'Home Zones' (IHIE, 2002). Within Home Zones, pedestrians and cyclists share the highway with vehicles. All public routes should pass in front or to the side of buildings, properties should not have their backs to public areas. In order to create a community feel and a safe and vibrant environment, it is important that most buildings have active fronts to the street – where the front door and several windows are facing.



Primary access route



A States of Guernsey Government Department

3.5 Urban design

The urban design strategy is set out in such a way to facilitate an appropriate level of flexibility in design but provide a consistent approach across the site. A number of site specific design concepts have been identified for the new development. These include:

- A series of landscape courtyards around the new wetland area in the centre of the site, maximising the number of houses that benefit from views and proximity;
- The location of landmark elements and townscape arrangements in key locations, such as along view corridors and terminating vistas;
- Soft 'urban' edges overlooking the open landscape to the west;
- Strongly contained and continuous streets in the central and focal areas including focal open spaces;
- Key gateways formed at the entrances to the site that bring views and vistas into the site and enhance visual connections on both directions; and
- Small clusters of informal courts, squares and spaces behind the main frontage development.

The urban design strategy does not prescribe a maximum number of dwellings that can be sited on each parcel. It has been left up to the skill of the architect to increase the density, with intelligent designs that still ensure the provision of private spaces and prevent overlooking. To achieve a high quality design solution a range of densities and open space provision is being promoted to reflect the transition from character of the open countryside to the west and the close knit pattern of urban development to the north, south and east. Higher density development would be concentrated away from the western edge and would be closely related to the existing built-up areas. Buildings will be typically two to three storeys in height.

As the density of development decreases towards the western edge of the site some 1½ storey building may be included to allow the landscape to take precedence and establish a transition from countryside to development.

Figure 16 sets out the main character areas across the Belgrave site. The built form character areas are heavily influenced by the proposed landscape character areas described earlier. There are two main built form character areas, one to the north of the site relating to Vale Road and one to the south relating to Victoria Avenue. These two areas are separated by the new Marais landscape character area (A) in the middle of the site.

Within these two main areas there are four different townscape characters. These are as follows:

- Urban street (1): The character of the primary access road and the secondary access road will be based upon a formal urban perimeter block structure where there is a direct relationship between the buildings and the street. Townhouses and apartments will wrap the edges of the streets and squares creating a strong sense of enclosure and a more formal character. The highest density and storey heights will be found along these streets.

- Marais edge (2): These edges overlooking the new marais landscape will be less formal and create a transition between the urban character of the development and the new wetland. The built form is anticipated to be more modern in approach and a series of landscape courtyards soften the development edge and provide views of the landscape from within the development.

- Hougue frontage (3): This frontage will be highly visible due to its elevated position and will need to take into account the potential views over the development and landscape. It should be urban in character and create a coherent composition.

- Green lane (4): The development along the western site boundary should relate to the rural character of the existing wider Marais landscape. It will be less formal in character and include more soft landscaping. Courtyards and pockets of trees and hedgerow will break up the building line to help the transition between open landscape and development.

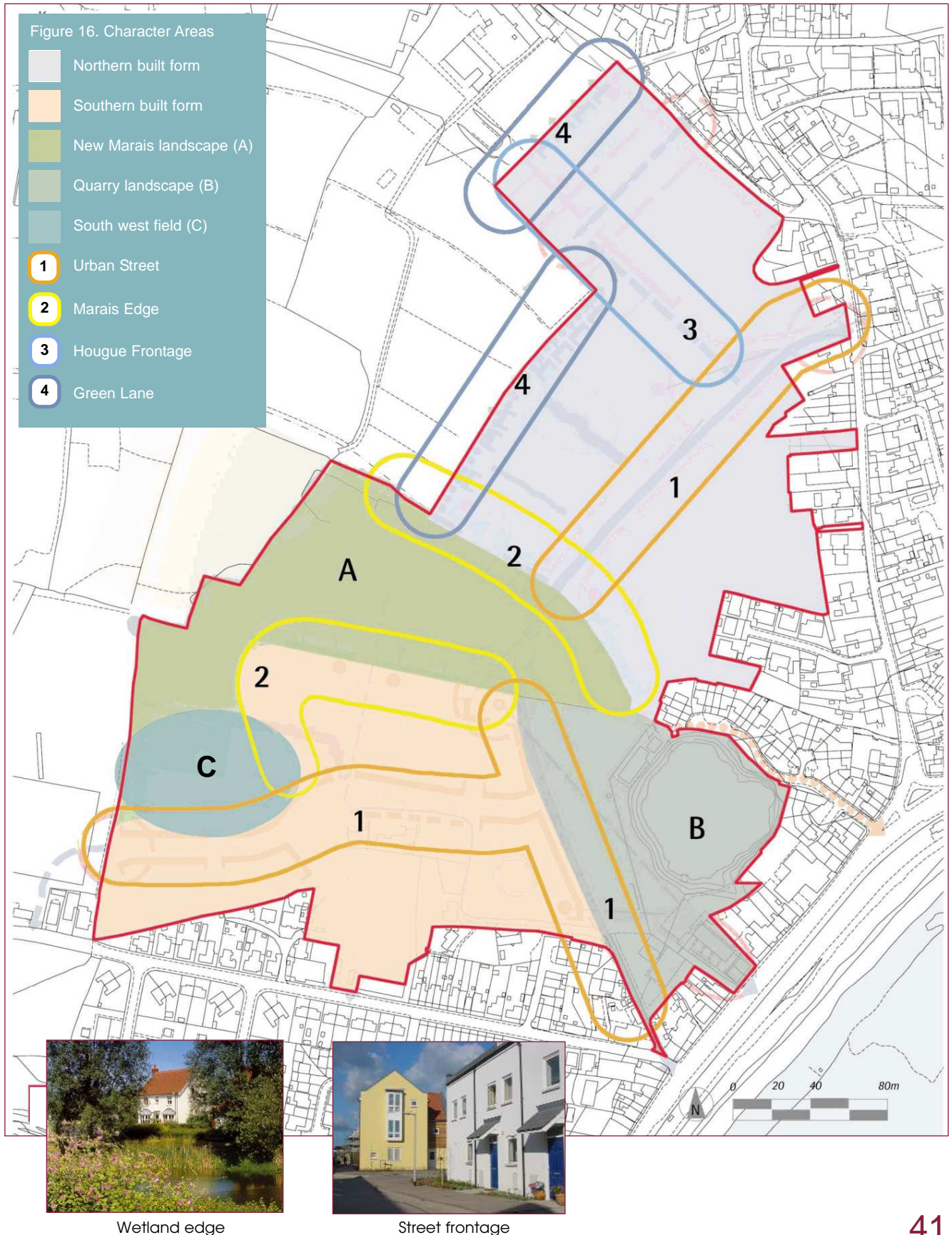
Generally, buildings will be arranged to form well enclosed streets and spaces and to terminate and direct views within the development. Strong street frontages will be used to clearly separate the public realm from private spaces and ensure that informal surveillance contributes to creating a safe urban environment. Low walls (1.0m high) or dwarf walls with railings above should be used to define boundaries in front of properties. Front gardens should generally be no deeper than 5.0m to maintain visual contact with the street and contain spaces. Long gardens would detach properties from the street and would not enhance the community feel in the area. There should, however, be clear separation between private and public areas to avoid amenity conflicts.

The overall development will be designed around a consistent and distinctive Guernsey identity, but each phase of the development will create a special neighbourhood area with its own unique blend of house types and character. The individual house types will be adjusted to each location giving a sense of variety and complexity of urban environment while at the same time avoiding the clash and jarring of randomly juxtaposed architectural styles. The palette of building materials will respect the local context yet can be interpreted in a modern way to create a contemporary design and appearance.

Outline Planning Brief

Prospective developers will be required to design a layout which respects the privacy enjoyed by existing residents adjacent to the site, and which provides an area of private open space for the new dwellings. All of the living spaces in the units should have a close relationship with external spaces such

as balconies, courtyards, gardens and streetscape. Houses with gardens should be provided with a private open space, usually to the rear of the house, and as far as possible habitable rooms and adjacent areas on this side of the house should not be overlooked.



3.6 Land use

Housing

The States have resolved that the site should be predominantly used to provide affordable and social housing in accordance with targets to be established through the Corporate Housing Programme. This is likely to be developed as a series of phased parcels of between, say, 30-80 units. The exact housing requirements for each phase of development will be based upon relevant and up to date data available at that time. For the purpose of presenting a general profile of the housing provision proposed, an assessment has been made of the following documents:

- Housing Department Waiting List;
- Housing Department Transfer List;
- Housing Department current tenancies;
- Housing Needs Survey (Billet d'État IX, 2002).

A further housing needs survey will be completed in 2005/06 which will help to clarify these requirements.

Based on the data currently available, it is recommended that at least 60% of the accommodation provided should have no more than two bedrooms per home (i.e. 4 habitable rooms or less), of which at least 2/5 should be two bedroom accommodation. It is envisaged that a majority of the housing provided will be houses with gardens rather than apartment blocks.

Provision will be made within the overall development for at least one sheltered housing development comprising more than 20 dwellings.

WORKED EXAMPLE

A development parcel in the HTA is brought forward, which will accommodate 100 dwellings.

At least 60 ($\geq 60\%$) will have no more than 2 bedrooms. These 60 dwellings will comprise at least 24 ($\geq 2/5$) two bedroom dwellings and no more than 36 ($\leq 3/5$) one bedroom accommodation.

If a need is identified, then 20 of these one and two bedroom dwellings will be provided as a sheltered housing development.

The remaining dwellings ($\leq 40\%$) will comprise dwellings with 3 or more bedrooms.

Although this general profile assumes that the site will be used primarily for social rented housing, the inclusion of a mixture of affordable housing schemes, such as partial ownership, assisted purchase and self build, will be supported.

Community uses

Provision may be made for the development of community facilities that could be capable of being used by different agencies and community groups. Consideration will also be given to the provision of other amenities that may be needed to serve the new neighbourhood, such as a grocery, cafe, doctor's surgery or pharmacy. It is proposed that these uses will be clustered around a formal square in the centre of the site.

Water collection

Part of the site adjacent to Barker's Quarry will be required by Guernsey Water for the upgraded intake works, pumping station and control building. This facility should be designed to blend with the landscape; for instance, it could be below ground or earth sheltered. It is thought that an area of approximately 5000 square metres would be sufficient. The site boundary will depend on the detailed layout of the intake works and on the permanent access points. Guernsey Water also requires suitable vehicular access and turning space for dealing with waste material from the inlet screen and for maintenance staff and vehicles carrying out routine work to the pumps.

Sewage emptying point

The sewage emptying point is a major blighting issue, which needs to be removed. The dependence on the emptying point will diminish as more dwellings are connected to the main sewerage network. It is recommended that the sewage emptying point be decommissioned within five years of housing development commencing on the site. Sewage tankers would be diverted to other emptying points on the island. As a result of the network extension plan, there may be no additional load on alternative emptying points and the total number of visits may reduce.



A formal open space would act as a focus for community uses

Part Four

Implementation

4.1 General

Masterplanning

It is recommended that a detailed masterplan is prepared prior to the commencement of any works on the site. The masterplan should include and identify: infrastructure, highways, development parcels, site levels and indicative phasing. It would also deal with issues such as the waste transfer station, the sewage emptying point and the use of the former land fill site. Careful consideration needs to be given to any aspect that has to be implemented up front and particularly to the landscape design.

Consideration may also be given to some form of design codes, so that the various parcels work together and an architectural mish-mash is avoided.

Site preparation

It is recommended that attempts are made to improve the security of the site against further fly tipping.

Japanese Knotweed has been identified on the site and will need to be dealt with adequately prior to the commencement of any works and in accordance with best practice.

Archaeological investigations

A series of trial excavations have revealed archaeological remains which should be fully recorded before development takes place. Further archaeological investigations should be organised, taking into account the phasing of the development and the way that levels across the site are revised.

Habitat and species preservation

The following general recommendations are made as regards habitat and species preservation:

- Only remove bird breeding habitat outside of the main breeding season, except where this cannot reasonably be avoided.
- During redevelopment, undertake progressive removal of grassland/ruderal habitats from east to west to encourage emigration of ground dwelling fauna (and foraging Barn Owls) towards the wider Marais.
- Consider feasibility (and cost-effectiveness) of transferring reptile and amphibian populations to suitably prepared offsite habitats.



Japanese Knotweed sward



Investigation of standing stone



Frog found under refuges along with slow worms

Remediation

Prior to commencement of any engineering works on the site relating to demolition or construction, a quantitative survey and analysis of asbestos should be undertaken with a view to preparing and implementing a remediation strategy.

The matter of pesticide residues in excess of site specific values should be resolved at the time of addressing each development phase. The pesticide risk could be alleviated by the mixing of soils and/or the importation of clean cover to raise ground levels. The hydrocarbon risk would be dealt with by normal demolition practice involving the removal of storage tanks and fuel feed lines.

It is recommended that a passive venting trench is constructed around the quarry to protect existing and future houses from landfill gas. Gas membranes should be laid beneath new houses. This would also help reduce pesticide contamination risk by introducing a barrier. New build housing on the periphery of the fill should be constructed with passive venting foundations as a precautionary measure. The filled area should be reinstated with an effective cap to maintain or improve the current rainwater recharge protection.

The table below sets out the suggested prioritisation for action.

Description	Prioritisation Value
Installation of passive venting system for Stone's Quarry to prevent gas build up in confined spaces	5
Mitigation of high pesticide levels in top soils under proposed building footprints	4
Specialist review of the need for mitigation of asbestos contamination	3
Removal of hydrocarbon contaminated hot spots to minimise the impact on utility services	2
Disposal of fertiliser contaminated groundwater	1

Interpretive Note: 5 = High, 1 = Low. High prioritisation values equate to a 'high priority' with respect to tackling remedial need.

Earthworks

Earthworks at the site will include excavations for foundations and stream enhancement and filling for flood alleviation and road construction. No particular problems have been identified with excavation save the need to protect the clayey soils from changes in moisture content and mechanical disturbance.

It is imperative that any fill imported to the site complies with requirements to produce minimal leachate impact on the Marais stream and associated water environment. Imported fill should be clean, well graded granular material from a non-industrial source. Material should not be used from sites that might have a history of contamination.

In the case of existing stockpiles of tipped materials it is recommended that consideration is given to its use to make up levels in accordance with the required flood attenuation measures. However, this material must only be used in sealed cells in an area of the site that would only face inundation under the most extreme conditions. In addition, such placement should not compromise land quality beneath domestic gardens.

Foundations

It is recommended that spread footings could be built on the natural soils and designed to either an allowable pressure of 90kN/m² on the clay and sand strata or a value of 130kN/m² on the highly weathered rocks. For higher loads, short bored or driven piles could be considered.

Tests for chemical attack on foundation concrete concluded that the site contained generally low levels of sulfate concentrations and near neutral pH values. Higher sulfate contents in a small number of water samples classified the site as Class DS-2 in accordance with BRE Special Digest 'Concrete in aggressive ground'.



Stockpiles of tipped materials

4.2 Phasing

Phasing of the development is not straightforward because of the unknowns in relation to:

- the sewage emptying point and waste transfer station;
- the infrastructure provision (roads, flood defences and new outfall); and
- the method of housing procurement (funding, timing, tenure and mix).

Phase 1

Tipping within the areas indicated as Phase 1 should cease with immediate effect.

The new primary access will need to be constructed from the start to serve as an access for construction traffic. To enable the creation of the primary access from Les Banques, the States owned Belgrave Flats will need to be demolished and alternative accommodation found for its tenants.

Prior to undertaking any development, the existing gravity outfall to the sea should be replaced by a new gravity outfall, of internal diameter 1800mm or equivalent. This should be connected to the main Marais Stream via a new bypass channel. The water intake works should be upgraded in stages to suit the requirements of Guernsey Water. In order to avoid any interim impairment in flood performance of the system during the course of the development and implementation of the measures, the proposed outfall and bypass channel should be built and operational in advance of the start of land raising.

The landform within Phase 1 should be recontoured in accordance with the recommended design levels. The stream corridor and ponding areas should be excavated and landscaped in accordance with an agreed scheme. The design, implementation and on-going management of the stream margins and ponding areas could be undertaken as a co-operative venture involving voluntary bodies, such as RSPB Guernsey, the Conservation Volunteers and La Societe Guernesiaise.

The erection of new housing should commence on development parcels in the south eastern part of the site adjacent to Belgrave Lane.

As development progresses from east to west, the secondary access road should be provided to link with Victoria Avenue.

Phase 2

Phase 2 is dependent upon completion of the infrastructure works described in Phase 1 and the extension of the primary access

and services. When the development to the south of the new Marais landscape is complete, development parcels to the north and east of the primary access road can be brought forward.

Phase 3

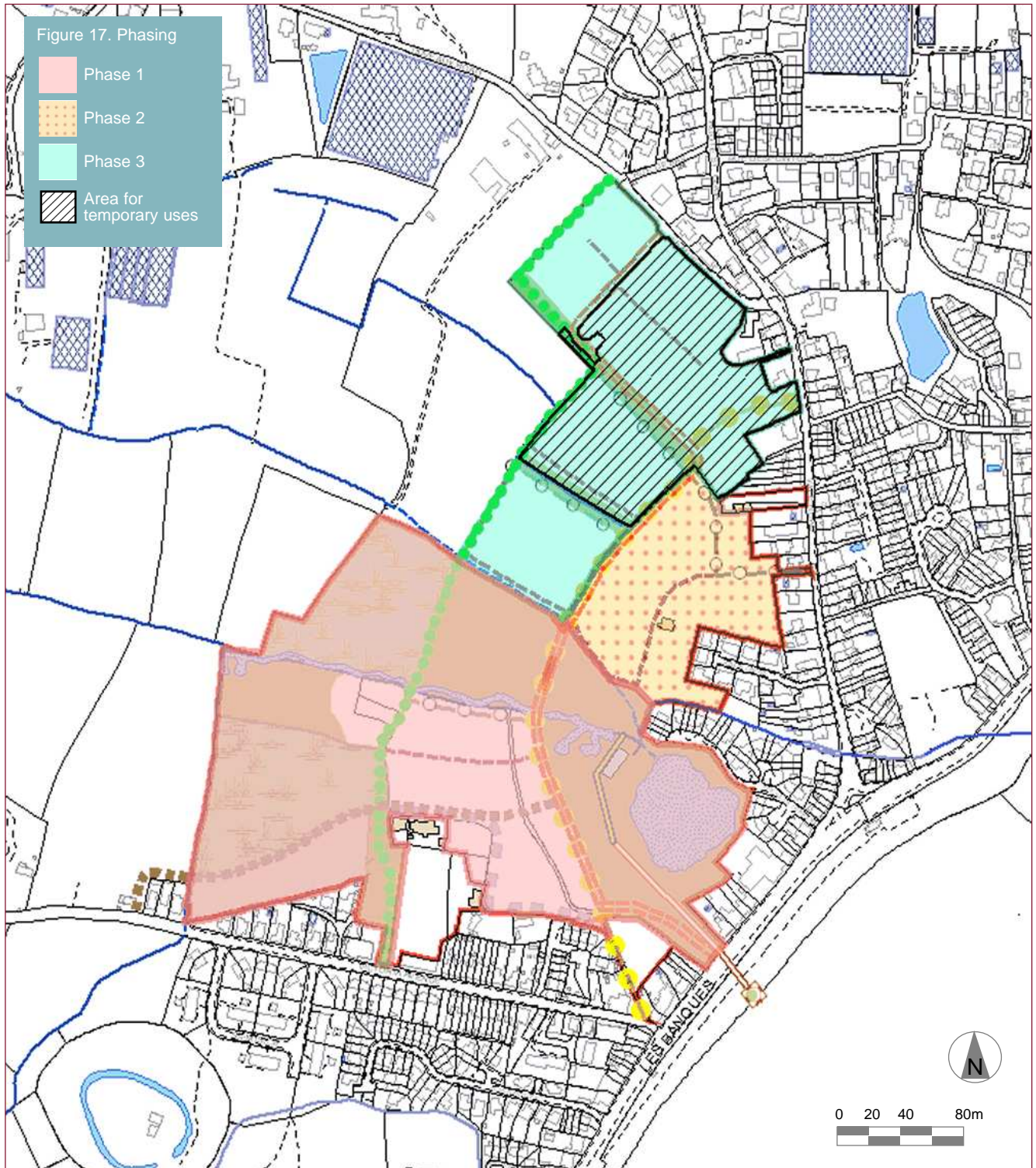
Phase 3 is dependent upon:

- decommissioning of the emptying point,
- relocation of the Waste Transfer Station and
- connection of the primary access to an improved junction at Le Murier. Traffic calming and speed reduction measures will also be required in Le Murier/ Duveaux Road/ Baubigny.

The final phase of development should ideally be the agricultural fields north of the new Marais landscape area. The levels on these should not be altered until they are sure to be developed.

In the short term and on a strictly temporary basis, to tie in with emerging development proposals and phasing, it will be possible to accommodate a number of clean, low key employment uses within parts of the HTA as identified in Figure 17. Best available techniques must be used to minimise any potential environmental pollution. Almost a quarter of the Island's water supply is collected from the Marais catchment and then pumped to Longue Hougue from which nearly half of the Island's drinking water is derived. In order to ensure that proposed uses are environmentally acceptable and to avoid development that may prejudice or inhibit the long term intention of developing the area for housing, the following criteria will apply:

- Any plant or equipment, buildings, other structures, and surfacing will be purely temporary in nature and, on cessation of the proposed use, such works will be completely removed and the land restored to a satisfactory condition for residential development.
- Potentially polluting activities which may adversely affect the land, water resources, air quality or residential amenity will not be acceptable, unless appropriate remedial, preventative or precautionary measures are proposed to remove, reduce or mitigate potential problems.
- Any activity should only involve limited vehicular movements.
- Only temporary planning permission will be granted, reviewed on an annual basis.
- A satisfactory scheme of site clearance, landscaping and after-care/restoration will be required.



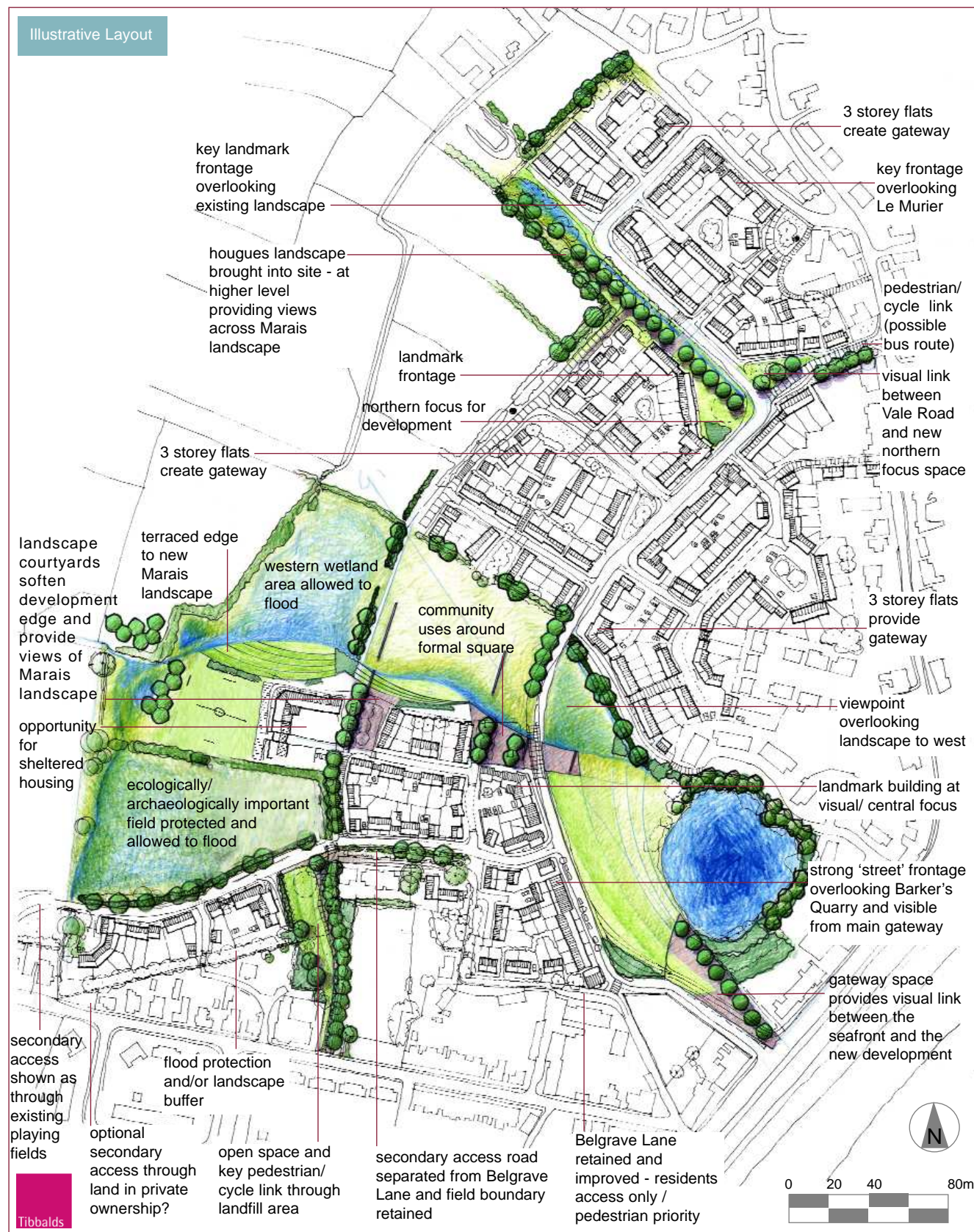
Appendices

1. Land ownership schedule

Cadastre Number	Property Name	Owner
B00029A	Land at Belgrave Lane	States of Guernsey
B00033	Bellegreve Flats	States of Guernsey
B00666	Burma	States of Guernsey
B00667	Calabar	States of Guernsey
B00673	Fountain Cottage	States of Guernsey
B00908	Duval Vinery	Riverside Vineries Ltd
B00909	Le Marais Farm	Mr. M. J. Blampied
B01282	Fields at Victoria Avenue	States of Guernsey
B01285A002	Stone's Quarry	States of Guernsey
B01309A	Peacehaven	Mr. & Mrs. C. J. Patch
B01310	Workshop	Mr. P. C. Langmead
B01310A	Greenways and The Wing	Mrs. A. P. Holford
B01310B	Land at Belgrave Lane	Mrs. A. P. Holford
B01310C	Land at Belgrave Lane	Mr. M. J. Northmore
B01313	Belgrave Cottage	States of Guernsey
B01314	1 Primrose Cottages	States of Guernsey
B01315	2 Primrose Cottages	States of Guernsey
B01316	Primrose Vinery	States of Guernsey
B01318	Grand Marais Vinery	States of Guernsey
B01319	Springfield Vinery	States of Guernsey
B01322	Barker's Quarry	States of Guernsey

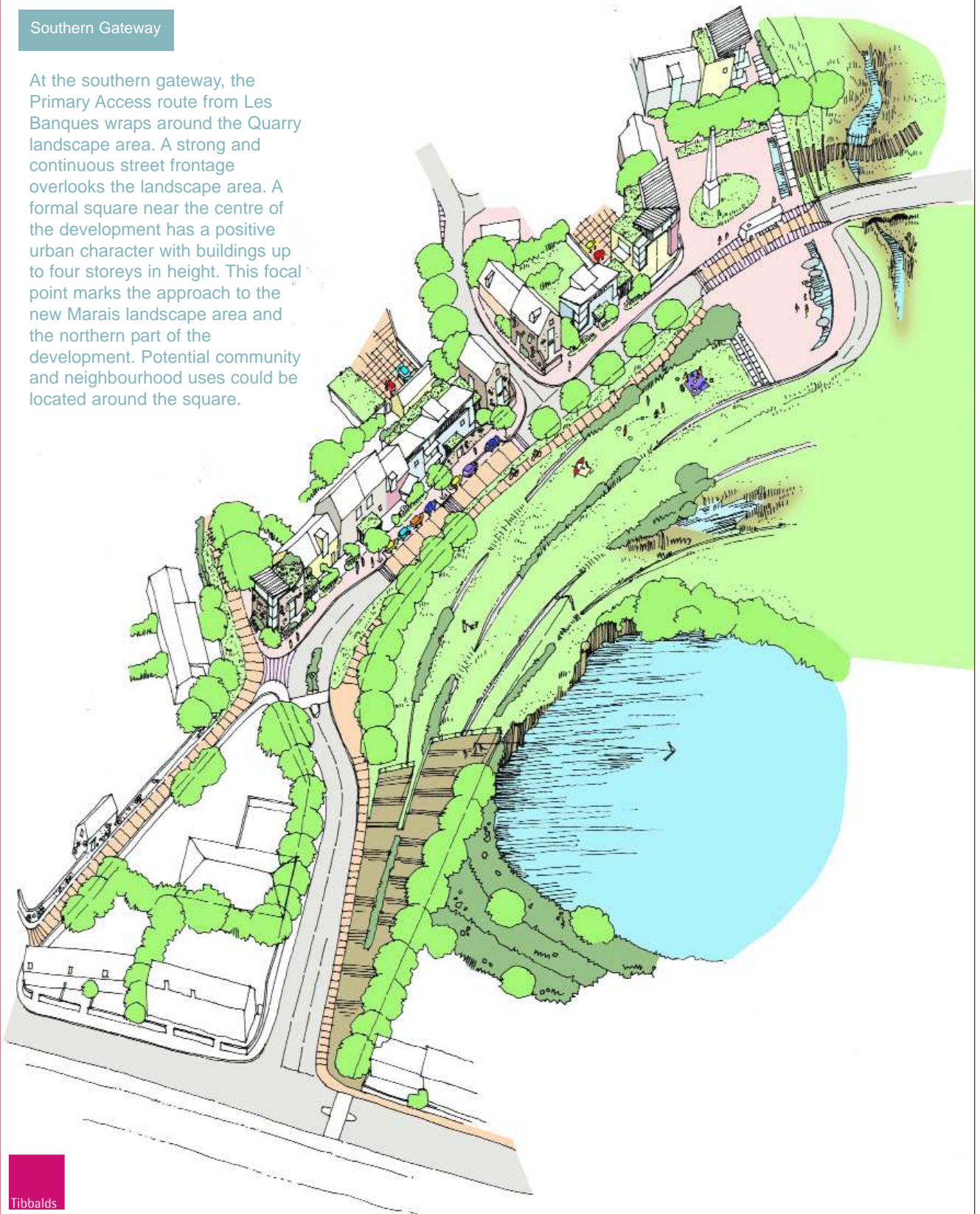
2. Illustrative layout

This plan interprets the design and development principles of the OPB and illustrates one way that the site could be developed. This illustration is not a final or definitive proposal and should not be considered to be binding on the developers of the site.



Southern Gateway

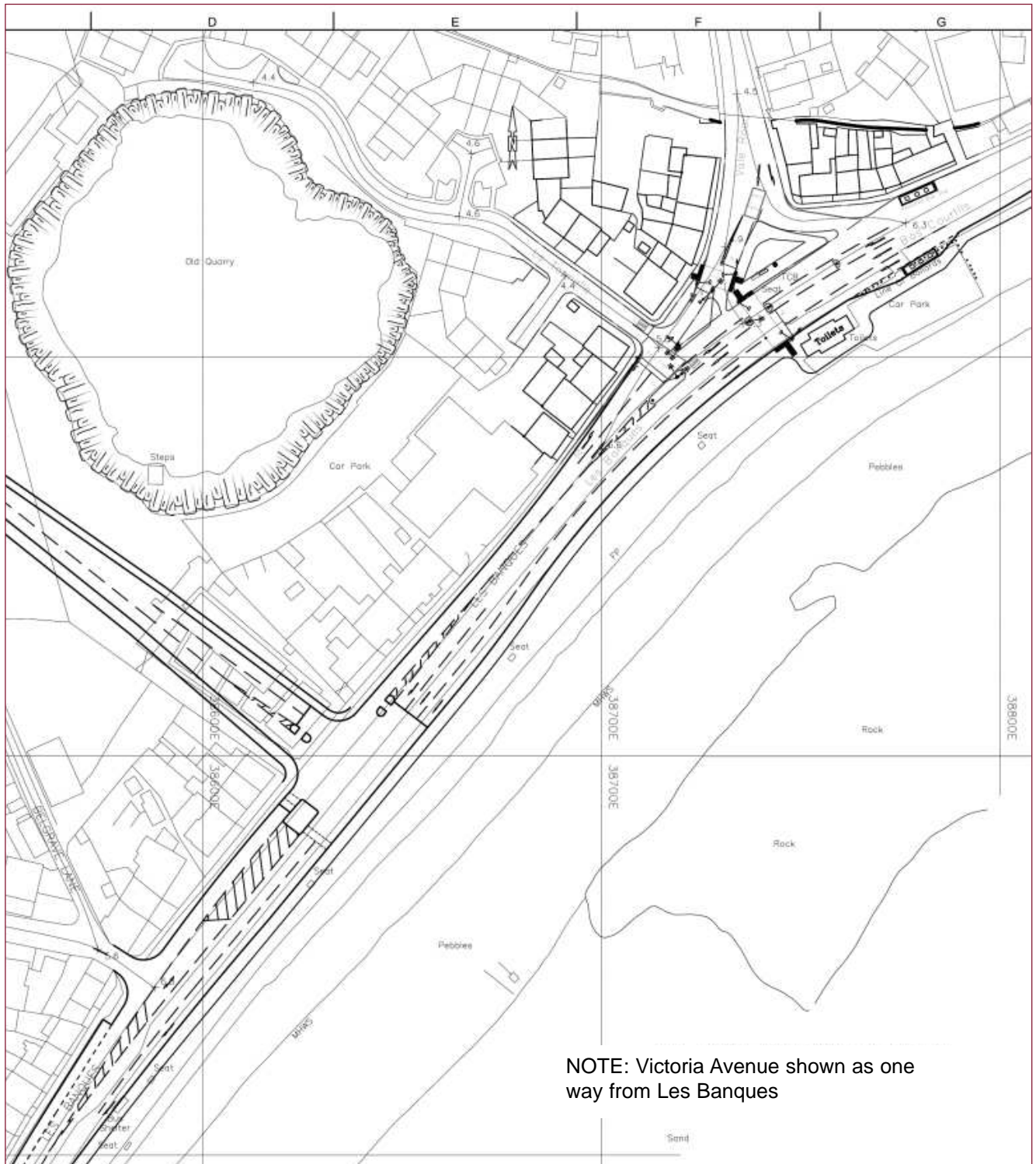
At the southern gateway, the Primary Access route from Les Banques wraps around the Quarry landscape area. A strong and continuous street frontage overlooks the landscape area. A formal square near the centre of the development has a positive urban character with buildings up to four storeys in height. This focal point marks the approach to the new Marais landscape area and the northern part of the development. Potential community and neighbourhood uses could be located around the square.





At the northern end of the site a pedestrian and cycle through route connects to Vale Road, while vehicular traffic is directed to Le Murier. The junction between these two routes is marked by an open space, which forms the central focus of the northern development area. A playground could be located here. Building heights are up to three storeys enclosing the space and ensuring activity within it.

3. Proposed access from Les Banques with improvements at the Halfway



References

Amplus Ltd	Contaminated Land and Geotechnical Investigation Report, March 2004
Binnie & Partners	St. Sampson's Marais Surface Water Drainage and Water Resources Study, Phase 2 Report, April 1995
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Black & Veatch Consulting Ltd	Modelling Report Belgrave Vinery - HTA8 Design, August 2004
C. J. Associates Ltd	Report on Preliminary Site Investigations No. A1111, 1990
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Luszczack Associates	Belgrave Vinery – Landscape Character Assessment, June 2004
Nicholas Pearson Associates and Environment Guernsey	Existing Ecological Conditions & Ecological Design Principles for (Re)Development, July 2004
Ove Arup & Partners Ltd	Belgrave Vinery OPB – Access Strategy and Highway Design, January 2004
UK Met Office, Hadley Centre	Scenarios of climate change for islands within the BIC region, July 2003
