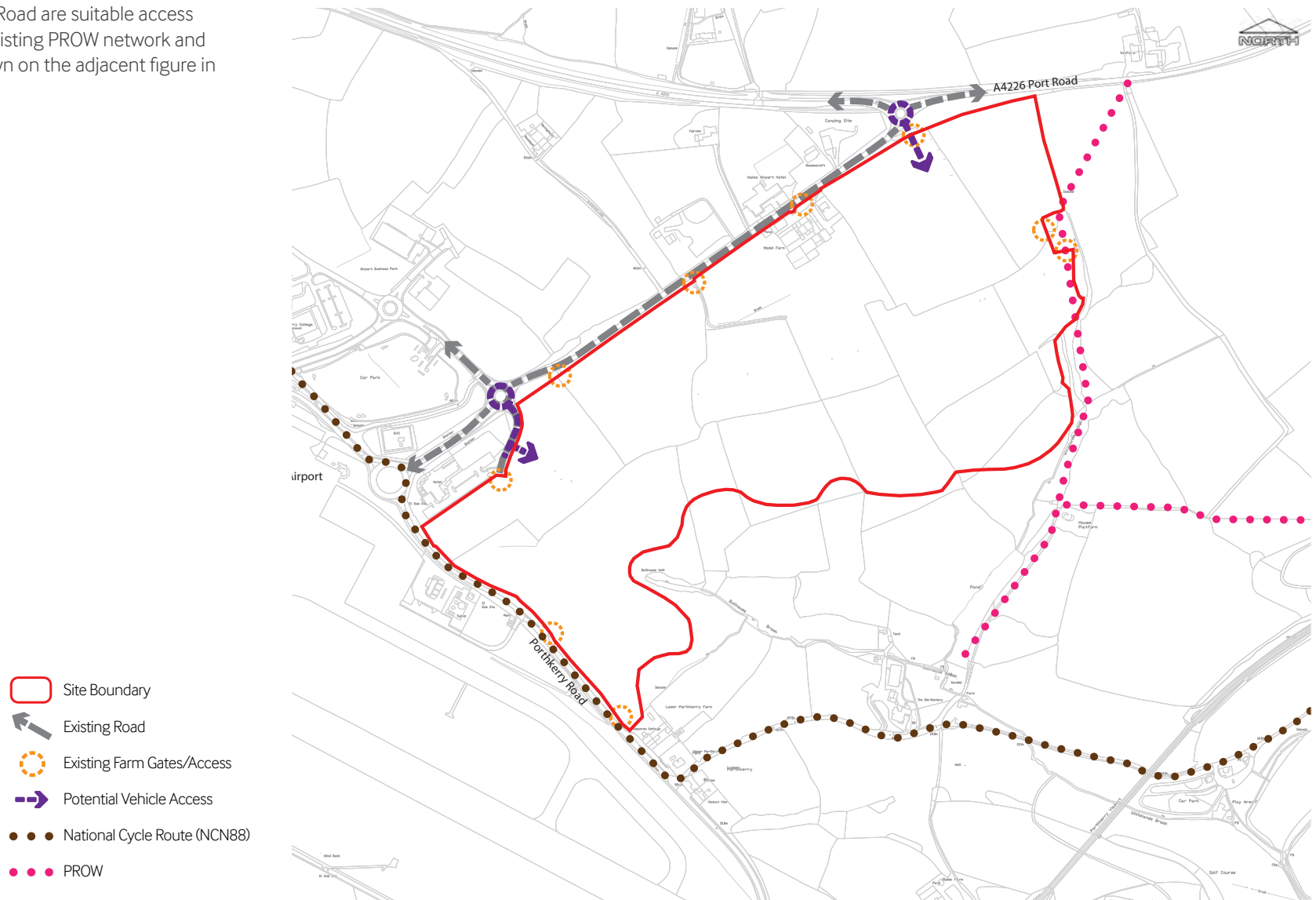


Access

Two access points along Port Road are suitable access points to serve the site. The existing PROW network and National Cycle Route are shown on the adjacent figure in relation to the site.



Constraints and Opportunities

An analysis of the site and surrounding context has identified a number of key constraints and opportunities that need to be incorporated into the development proposals.

Location

The site lies immediately adjacent to Cardiff Airport. The business park will target aerospace, aviation and hi-tech manufacturing sectors. The co-location represents a clear mutually beneficial opportunity.

Landscape

The site does not lie within any statutory designations and there are a number of detracting elements in the local landscape mainly Cardiff Airport complex. There is an opportunity to provide a large extension to Porthkerry Country Park.

Topography

The site is located on gently sloping land 70 to 50m AoD which faces south towards the coast which is less than 1.2km away at its closest point.

Access

Access for vehicles can be easily achieved from existing access points along Port Road. There is a good opportunity to create better walking and cycling connections to the local network.

Utilities

A number of utilities are associated with the site including gas, electricity and foul sewerage.

Ecology

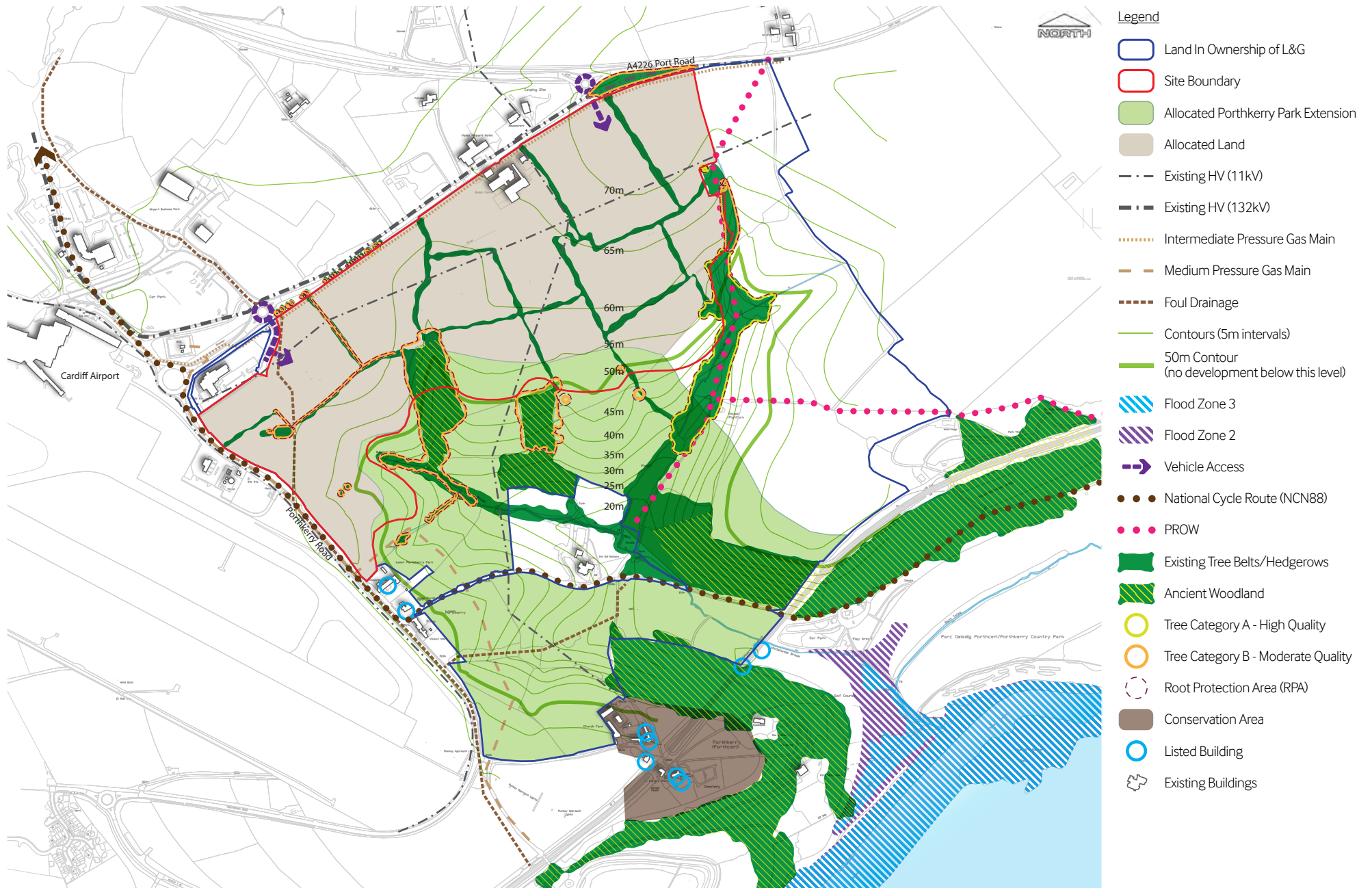
Retention of the existing network of ecology features will contribute to the local character of the area and create the framework for an enhanced green infrastructure with green links to Porthkerry Country Park.

Flood Risk

The existing topography provide the opportunity to create a SuDS and drainage solution along the southern boundary of the site with enhanced ecological qualities.

Recreation

As part of the proposal, 42ha of land in Legal & General's ownership will be transferred to the Vale of Glamorgan Council to facilitate an extension to Porthkerry Country Park.







DESIGN DEVELOPMENT

House Platform

Park View

Park View

Knock-wood

Design Principles

The establishment of the sites opportunities and constraints allows for a series of design principles to be established. These principles will be carried through and form the framework of the proposed scheme.

Design Principle 1 - Land Use

The following land uses shall be accommodated within the proposed development:

- B1, B2 and B8 (up to 31ha)
- Existing retained green infrastructure
- Green infrastructure and public open space (7.73ha)
- New spine road corridor
- Public footpaths
- Land expansion to Porthkerry Country Park (up to 42ha).

Design Principle 2 – Movement (Vehicle, Public Transport, Cycle/Pedestrian)

Vehicle access has been designed to ensure that the development will not adversely impact the operation of the existing highway network. The two access points will deliver infrastructure that will provide sufficient junction capacity up to a design year of 2029. To ensure that the site is accessible by sustainable methods of travel the high-quality Spine Road, which will route between the two points of access will provide a footway and a shared use foot/cycle way providing a walking and cycling route through the site with connections to the existing walking and cycling network and the proposed extension to the Porthkerry Country Park. Additionally, the Spine Road will incorporate bus stops to enable public transport to penetrate the site. This infrastructure and a high-quality Travel Plan will enable the development to reduce its impact on the highway network through journeys being made by more sustainable methods of travel.

Design Principle 3 – Green Infrastructure Strategy

Green infrastructure has been designed into the scheme through the incorporation of existing semi-natural features and provision of new green space in a network of connected features within and adjoining the scheme.

- Protection of Whitelands Brook corridor adjoining the eastern site boundary
- Incorporation of much of the existing hedgerow network and landscape buffers into the scheme layout
- Provision of functional greenspace of biodiversity value as part of the SUDS scheme (swales, attenuation areas and ditches)
- Off-site native woodland and scrub planting
- Links to public rights of way through high quality green space
- Connection to existing cycleway.

Design Principle 4 – SUDS and Drainage

Surface water from the existing site is believed to be directed overland to the lower areas to the southwest of the site towards the Bullhouse Brook and Whitelands Brook. Surface water from the proposed development will be treated and controlled at source wherever possible and then directed to the existing watercourses via new outfalls utilising a variety of sustainable drainage measures. Surface water runoff from impermeable surfaces will be restricted to existing greenfield runoff rates through the provision of green swales, end of pipe detention basins and low-tech complex control chambers (SuDS Site Control Structures). The proposed surface water drainage scheme provides

SuDS elements to control the disposal of runoff from the redeveloped site and to provide quality treatment via a SuDS treatment train. Foul water for the development would drain by gravity to the existing DCWW Porthkerry foul water pumping station. Foul water would then be pumped via the existing 350mm dia. rising main to the east of the site.

Design Principle 5 – General Design Approach for the Public Realm

The public realm should be designed to encourage, support and sustain public activity in the external environment. Detailed designs for the spaces must create a distinctive and memorable place, delivering a character which is appropriate to the contemporary nature of the new development.

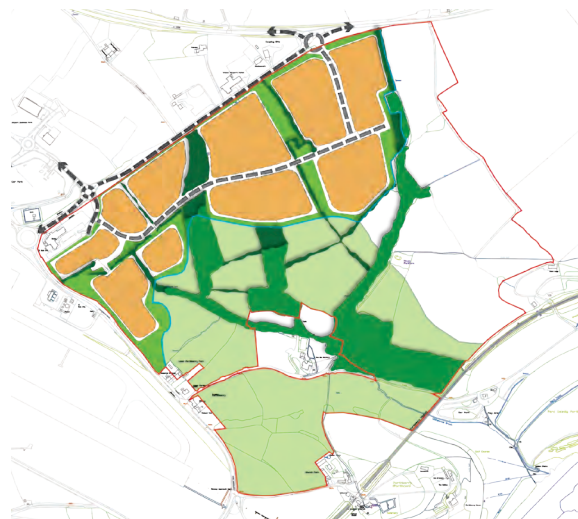
Design Principle 6 – Parking and Servicing

Parking will be provided in accordance with The Vale of Glamorgan's 'Parking Standards' SPG. Parking will also play a role in the promotion of sustainable travel through the application of a Car Parking Management Strategy which will introduce measures such as 2+ parking spaces, the suppression of parking spaces and a criterial assessment of employees' need to travel by car. Adequate and suitable access and servicing areas will be provided to enable HGVs and refuse vehicles to enter and exit the individual units safely.

Evolution of Design

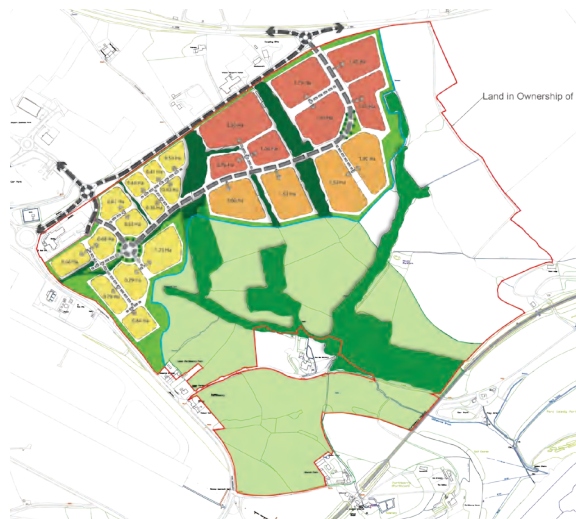
The design of the scheme has undergone design changes in response to technical information and changes in requirements from the client, local authority and stakeholders. The main design changes are outlined below:

July 2018



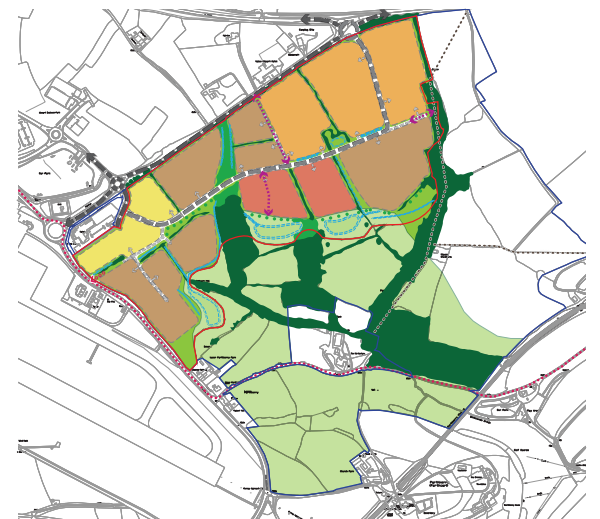
- Initial framework masterplan process undertaken before some technical documents were available.
- Utilises existing access point.
- Retains key landscape and ecological features.

October 2018



- Mix of development made available and land use aspirations from client and LPA.

June 2019



- Landscape and Ecology information available which highlights importance of wooded areas, individual trees and hedgerows. Consequently these are incorporated into the development with suitable buffers.
- Drainage information available and attenuation ponds and Swales integrated into the development.

