



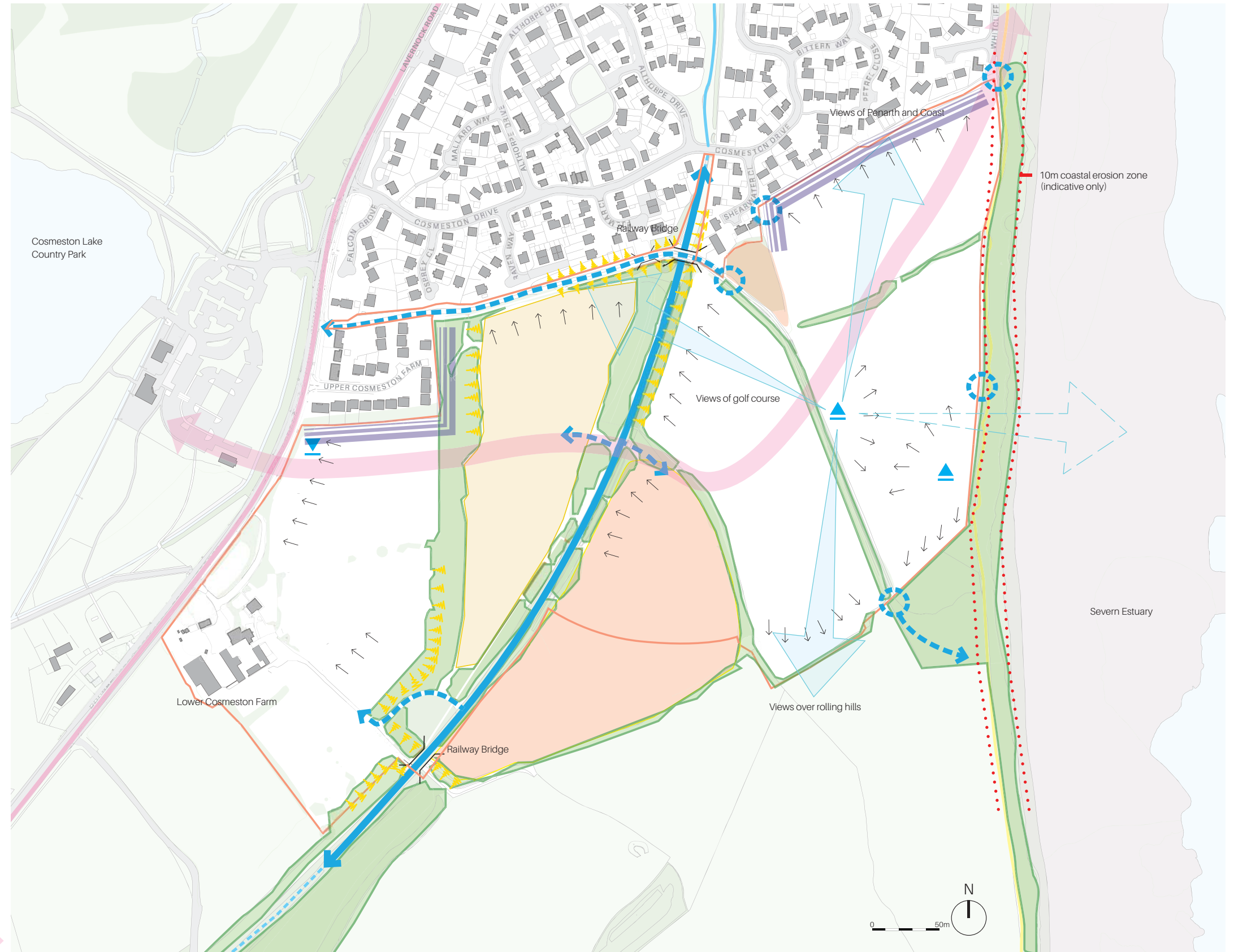
3.0 INTERPRETATION



View from the eastern portion of site looking north towards the Panarth Head

3.1 OPPORTUNITIES & CONSTRAINTS

This part of the Design & Access Statement seeks to make sense of the site analysis undertaken and understand how a masterplan layout may respond to its immediate context. The following opportunities and constraints diagram summarises the key findings of the site analysis and begins to inform how a masterplan layout can be developed on the site.



3.2 KEY SITE FEATURES

The following diagram shows the key features of the site and the main physical constraints to development. The masterplan aims to create links between these features.

The connectivity the masterplan promotes is between; the Coastal path, NCN88 cycle route and the Cosmeston Lakes Country Park, forming a network of open public amenity spaces and active transport corridors.

Some of the physical constraints to consider include the numerous green corridors and ex-quarries which provide unsuitable ground conditions for development.

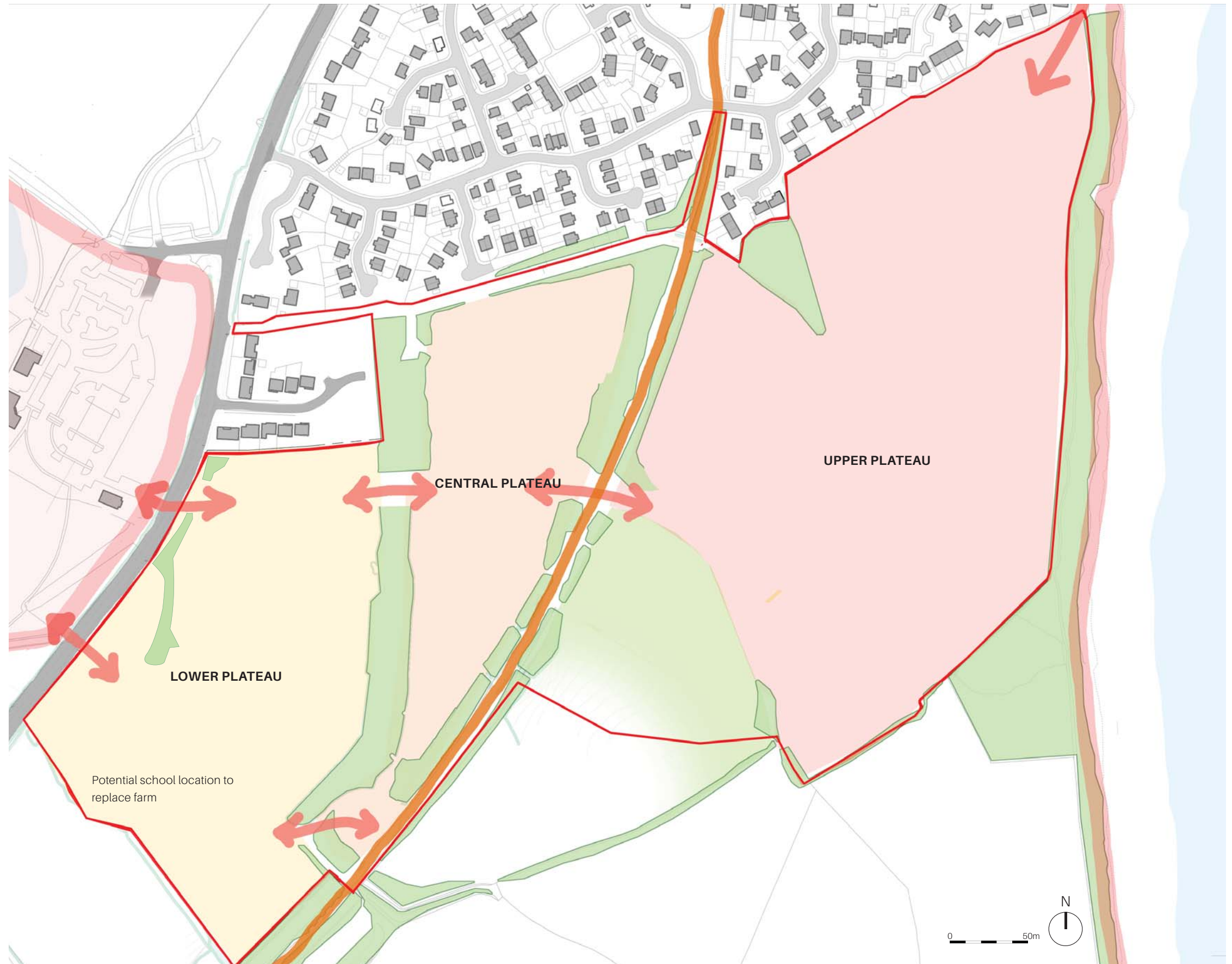


3.4 SITE ENTRY & PLATEAU CROSSING POINTS

The masterplan layout utilises the intrinsic properties of the site. As already discussed, the distinctive plateaus are an opportunity to sub-divide and naturally create complementary yet distinct character areas within the masterplan layout.

Entry to the site and between the different plateaus is driven by minimum intervention or alteration of existing ground levels and ecology.

- 2 separate vehicular access points from Lavernock Road; southern priority junction serving the lower plateau and potential school location, northern priority junction serving central and upper plateaus. There will be no vehicular linkage between the northern and southern access points within the site.
- Pedestrian/cycle access (and emergency vehicular access) at north east corner of upper plateau.
- Crossing points between different plateaus located in areas of least level change.
- Cycle & Pedestrian route provides access from north / south to the centre of the site.



3.5 SITE DESTINATIONS & KEY DESIRE LINES

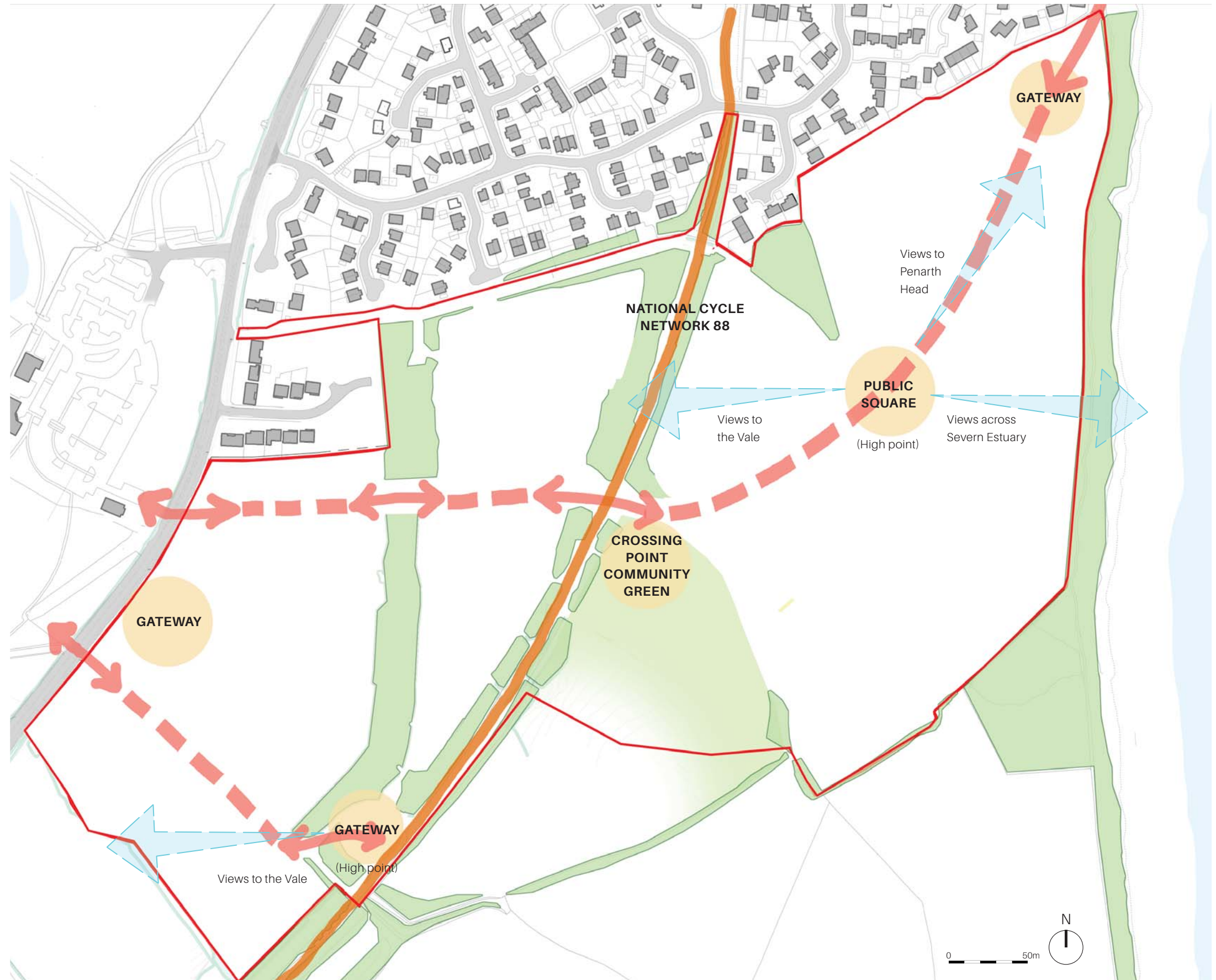
Connecting the site entry and plateau transition points are the key desire lines that run throughout the site. This will form the primary pedestrian link between the coastal path and Cosmeston Lakes. The NCN88 Cycle route also forms a key desire line, that runs north to south, forming an active transport link between the site and Penarth town centre.

Key destinations are set out along these desire lines responding directly to the site and have informed how the masterplan layout has developed. For example, the highest point in the upper plateau will be a focal point, providing a key space that will have significant views out of the site.

The new link will intersect with the extended National Cycling Network route 88. The crossing will be celebrated with community focal point spaces and public art. This will also be a suitable position for other potential community facilities such as a bicycle rental station.

The destinations create a network of nodes that allow areas of different character to have a focal point which will help create a legible and coherent masterplan.

The linkage will promote sustainable travel, active lifestyle, a much closer relationship to nature and it will create focal points for the new and existing communities of Penarth. This key principal of the masterplan will foster the creation of a unique sense of place.



3.6 NATURE CORRIDORS

Preserving the existing nature corridors is essential to the protection of ecology found on the site. The layout proposes areas where existing hedgerows can be enhanced, where new areas of hedgerow can be replaced, and the creation of new habitat to improve the overall biodiversity of the site.

The strong north/south green corridors are improved by new connections east/west. Where corridors must be crossed, this will be minimised and tree canopies retained or created to allow wildlife passage at high level.

From the north east corner of the site, an inviting public green space is created to draw pedestrians up into the site and towards the focal point of the upper plateau.

The enhanced ecological areas of the site will provide the new neighbourhood with green spaces creating a unique sense of place. It will encourage walking and cycling as well as providing the local wildlife with valuable habitat spaces and connections.

By retaining as much of the existing hedgerows and wildlife habitat as possible we allow the new housing will have a much closer relationship to nature. Well-being potential is maximised by locating new public space and playground facilities within this rich, landscaped environment, reaping the benefits of the micro-climate and the sounds of nature. We have introduced nature walks from the coastal path, through the site to the Cosmeston Lakes Country Park and also along the old infrastructure of the railway line.

Existing green corridors, site model photo



Existing green corridor, site photo



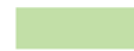




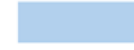




3.7 NATURAL HABITAT

Overall there will be net gain in natural habitat.

Existing green corridors covering approximately 38 350m², generally running north-south, will be mostly retained and enhanced. Proposed new hedgerows will link the existing corridors east-west creating an interconnected network of habitats that offer enhanced foraging opportunities and encourage greater biodiversity.

The creation of wetland habitats as part of sustainable drainage system will increase opportunities for protected and notable species and provide additional biodiversity gain.

The following hedgerow and habitat calculations are based on the existing tree and habitat surveys and the proposed master plan arrangements and they are approximately as follows:

	Retained hedgerow	29 600 m ²
	New hedgerow	10 300 m ²
	Grass/meadow, orchards or allotments	19 600 m ²
	Private gardens soft landscape	25 000 m ²
	Wetland habitat; SuDS swales and infiltration basins	24 100 m ²
	Water & Wetland habitat; Attenuation pond (surface area)	2000 m ²
	Dormouse crossing point utilising existing and proposed tree canopies	
	New habitat connections	
	Retained mature tree	
	Pedestrian passages designed for unobstructed wildlife movement	





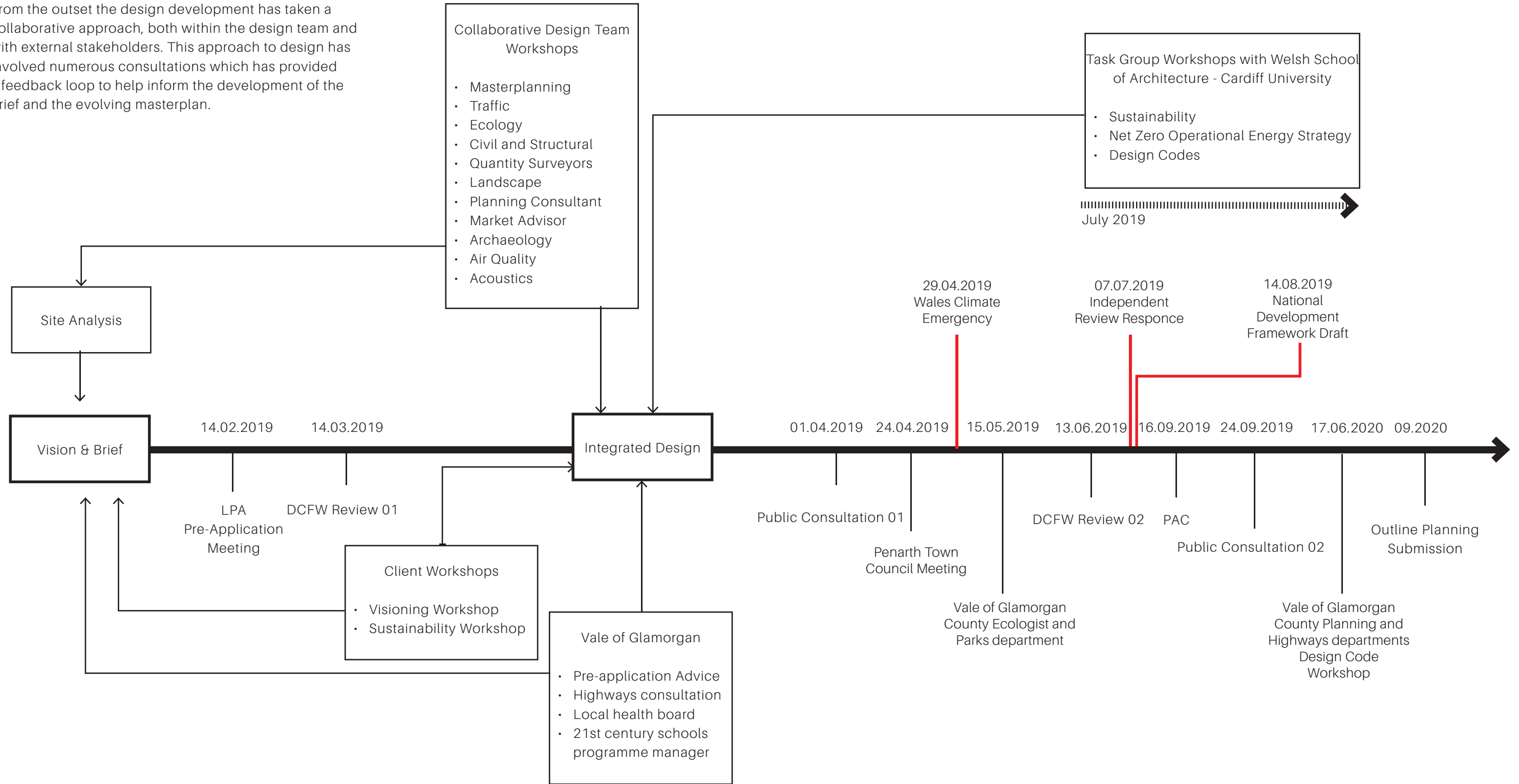
4.0 DESIGN DEVELOPMENT



View from above the site's east plateau looking south towards the Flat Holm and Steep Holm islands

4.1 COLLABORATIVE DESIGN APPROACH

From the outset the design development has taken a collaborative approach, both within the design team and with external stakeholders. This approach to design has involved numerous consultations which has provided a feedback loop to help inform the development of the brief and the evolving masterplan.



4.2 CONSULTATION

The project has undergone several reviews and consultation events with the Local Planning Authority, Vale of Glamorgan, Design Commission for Wales and Local Community. The following list summarises some of the key consultation events that have taken place to date:

VoG 21ST CENTURY SCHOOLS PROGRAMME - 13 NOV 2018

Meeting confirmed that there is a need for a 2FE School in Penarth within Cosmeston area.

PRE-APPLICATION ADVICE - 17 DEC 2018

Vehicular access from Lavernock Road only - traffic priority to be given to cars on Lavernock Road

Inclusion of Lower Cosmeston Farm within the application site on the basis that it will be used for a 2 form entry school which will require a greater land take than the 1 form entry school required in the LDP allocation.

DCFV REVIEW 01 - 14 MAR 2019

An initial review was undertaken at an early stage in the design process, after our initial site analysis and research, but before a firm layout had been progressed, in order to be able to reflect and act on comments received.

It was observed that clear objectives for the outcomes desired should be articulated in the project vision not only in response to the Act but in terms of placemaking, active travel and securing long term public value.

PUBLIC CONSULTATION 01 - 01 APR 2019

Similarly, an initial early public consultation was undertaken to listen to comments from the local community, understand their needs and address some of their concerns. It was well attended with 154 registered visitors and an estimated 200 visitors in total.

Some of the key concerns that came out of the consultation event were the potential impacts to traffic on Lavernock Road and the perceived lack of capacity at local doctor's surgeries.

LOCAL HEALTH BOARD - MAY 2019

Following the public consultation, the Local Health Board were consulted to see what options the development could provide in terms of health care provision. The current thinking is that 'drop in' facilities may be provided.

VoG COUNTY ECOLOGIST AND PARKS DEPARTMENT - MAY 2019

The Parks department were very positive about creating green links into the coastal path and Cosmeston Lakes Park.

DCFV REVIEW 02 - 13 JUN 2019

'The connection through the site to Cosmeston Lakes will help to ensure that this development is stitched into the surrounding settlement and becomes part of the public realm of the town, therefore providing a positive public benefit.' DCFV report June 2019.

The road hierarchy and resulting character of different street types should be developed further to establish key design principles. The entrance 'boulevard' could be further strengthened.

A range of unit types are proposed which is positive, but this could be more mixed across the site to ensure that enclaves of one particular type do not have a negative impact on the overall character of the site and sense of community.

PUBLIC CONSULTATION 02 - 24 SEPTEMBER 2019

It was a well attended event with 125 registered visitors and around 150 visitors in total.

The key concerns that came out of the consultation event were the perceived impacts on traffic on Lavernock Road and that the development is too large, apartment blocks are out of scale and character, loss of green space, pressure on existing local services in particular doctors surgeries and insufficient existing public transport provisions for the scale of the development.

PAC RESPONSES SEPT-JANUARY 2019

Detailed report of PAC responses from the relevant authorities and stakeholders is included in the planning statement enclosed with this application.

VALE OF GLAMORGAN COUNTY PLANNING AND HIGHWAYS DEPARTMENTS DESIGN CODE WORKSHOP - 17 JUNE 2020

Extensive discussion covering diverse range of concepts and issues including; school location, key spaces and playgrounds location, coastal buffer areas, street design, character areas, Net Zero Operational Energy strategy, design code implementation.

The points made during discussion were carefully reviewed and considered in the followed masterplan and Design Code revisions .



Photos from public consultation event held on the 1st April 2019

4.3 INITIAL STRATEGIC OPTIONS

The major constraints that affect how the site will be developed include the need to navigate the challenging topography of the site and the need to maintain the prominent north - south nature corridors.

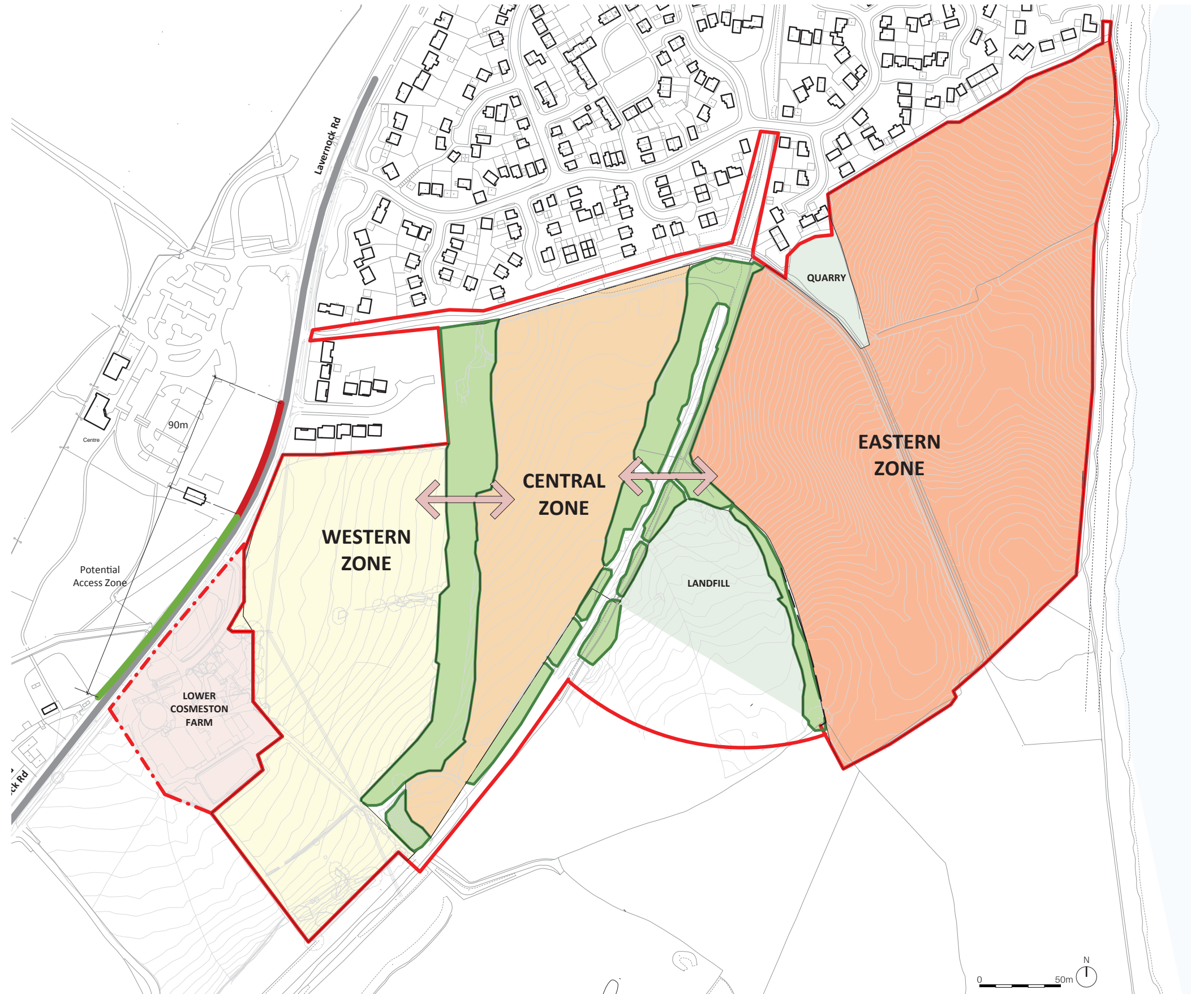
Discussions with the LPA have indicated that vehicular access to the site can only be from Lavernock Road. The main access route within the site will run east - west, potentially impacting on north-south corridors. The number of crossing points will be minimised to reduce the ecological impact and enhancements to natural habitats will be made where possible.

The site levels inform where the best place for these 'crossing points' to occur. This also coincides with natural breaks in the existing hedgerows. The ground conditions also suggest that the landfill site is unsuitable for development, but could be used to provide a large public open space.

SCHOOL LOCATION

The increase in the size of the school to 2 Form Entry, was not allowed for in the LDP site allocation. The impact of accommodating the extra space on the site would reduce the developable area for housing.

Locating the school on the southern end of the site would help reduce logistical issues with the ability to parcel the area of land off for a separate school development. This could also enable the school to be delivered independently of the residential developments within a quicker time frame. In addition, concerns over safety and wellbeing issues of being next to construction sites with later phases of development will be minimised.



4.3 INITIAL STRATEGIC OPTIONS

The following strategic options consider how the masterplan could be developed with different approaches to the principle vehicular access route(s) to the site. The proposed access strategy has been a subject to a road safety audit procedure.

VEHICULAR ACCESS

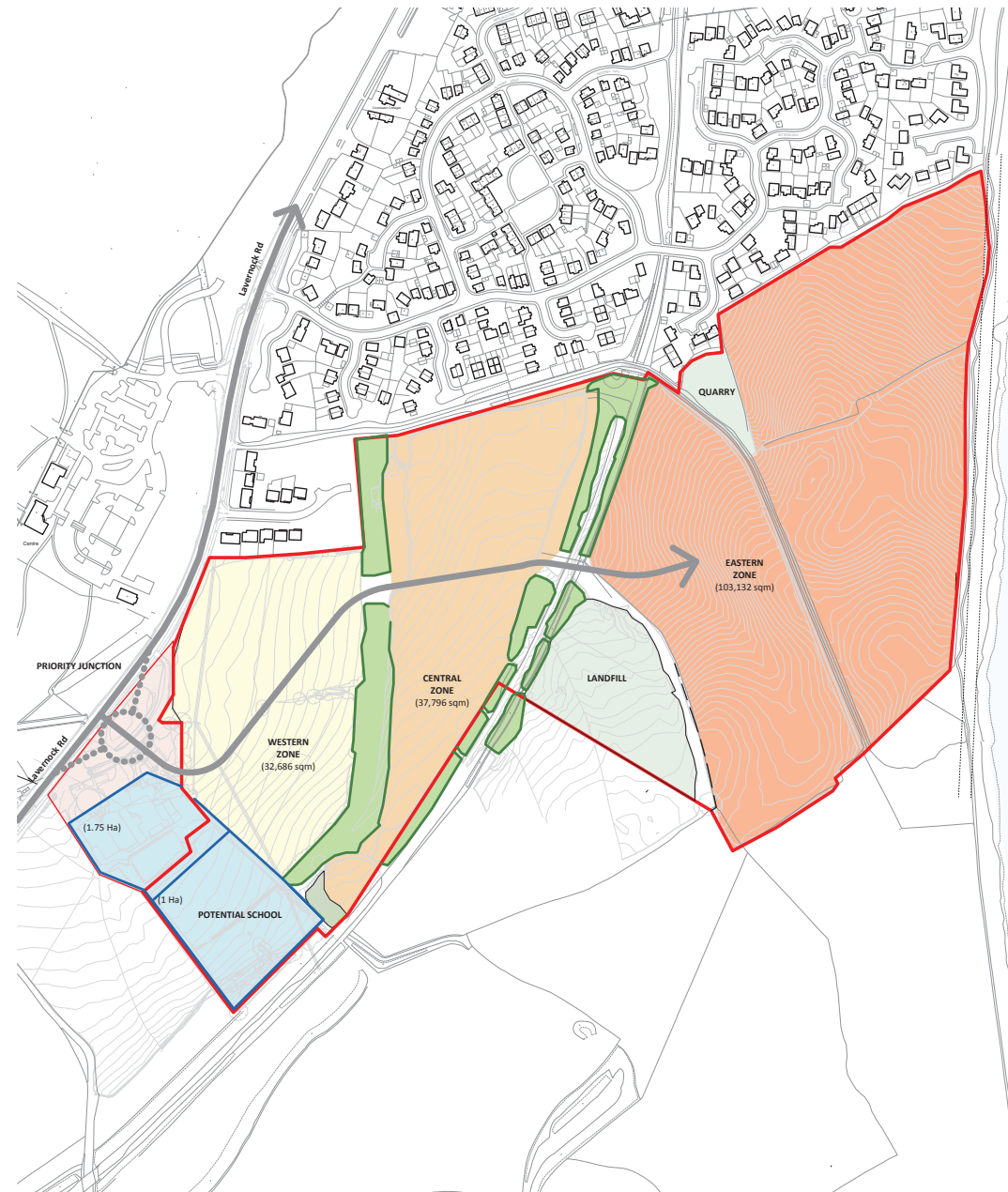
The local planning authority has indicated their preference for traffic on Lavernock Road to be given priority over vehicles exiting the site. Another factor influencing the options is the minimum distance from the adjacent Upper Cosmeston Farm junction for any new junctions leading into the site.

Option 1 looks at either a single priority junction or roundabout to serve the whole development. The junction would also serve the primary school. A roundabout option would however impede on the priority of vehicles on Lavernock Road. This option also concentrates all the traffic to a single entry/exit point increasing the potential for congestion.

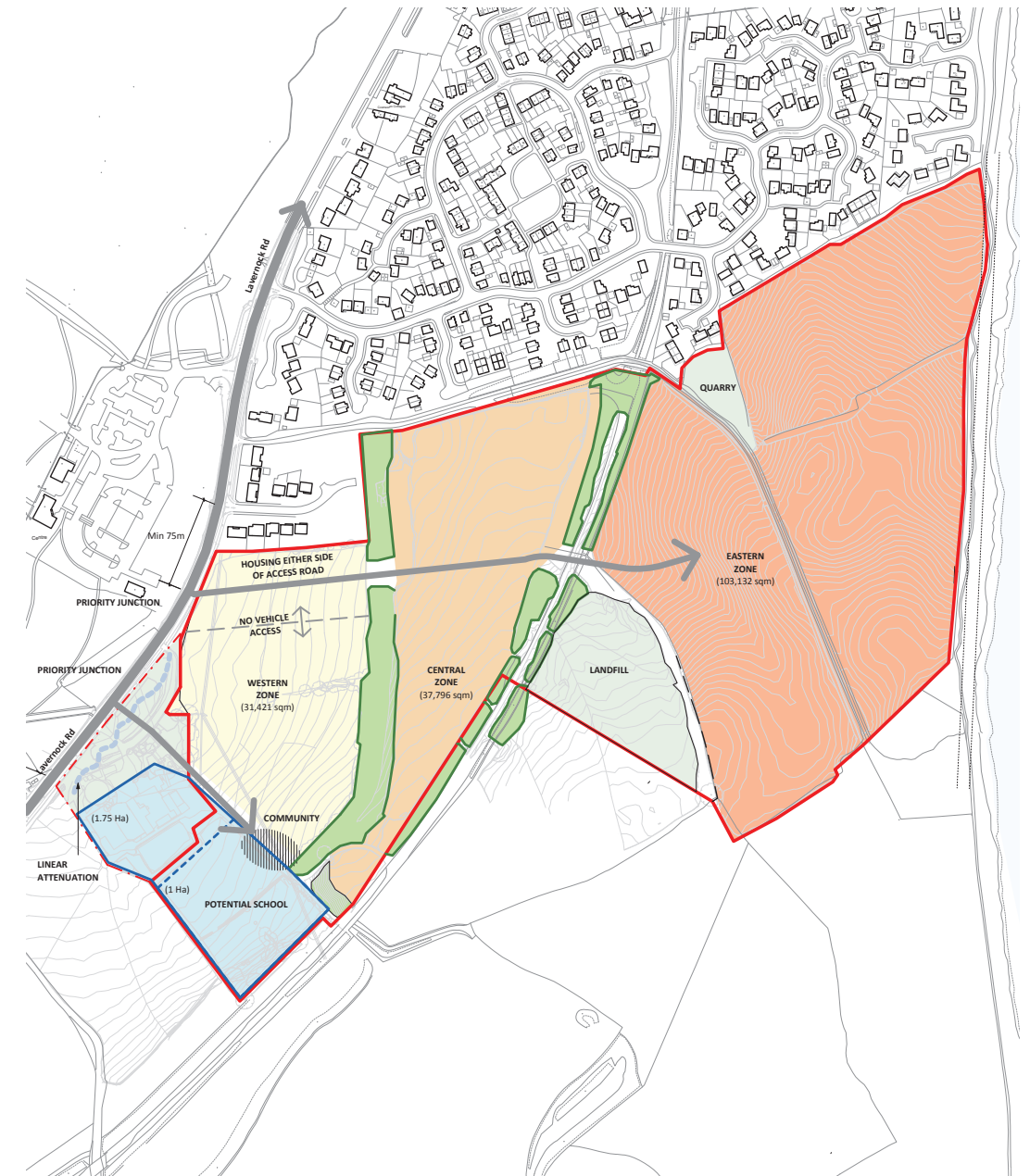
Option 2 looks at a primary junction serving the school and a development on the lower plateau with an additional priority junction serving the central and upper plateaus. This dilutes traffic entering and egressing the site.

ACTIVE TRAVEL CONNECTIONS

The masterplan will promote redeveloping the train line into a cycle path and establish sustainable transport links around the site, neighbouring residential developments and further into Penarth town centre. In addition the design aspires to create a clear pedestrian connection between Cosmeston Lakes and the coastal path. The planning application is accompanied by a comprehensive Travel Plan that will encourage and facilitate sustainable and active travel to and from the site.



STRATEGIC OPTION 01
Priority junction or roundabout

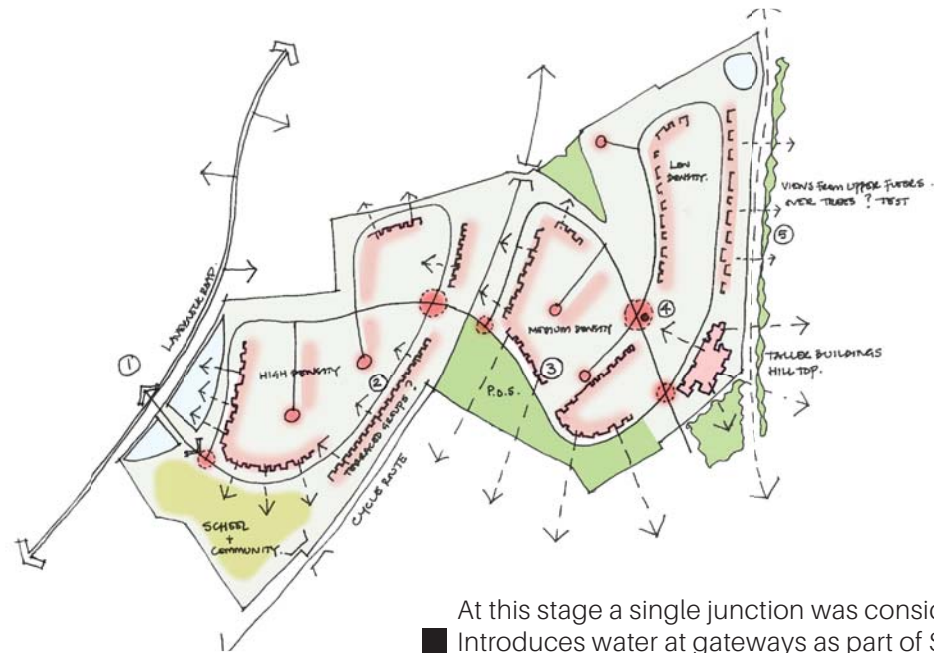


STRATEGIC OPTION 02
Two separate priority junctions

4.4 DESIGN DEVELOPMENT

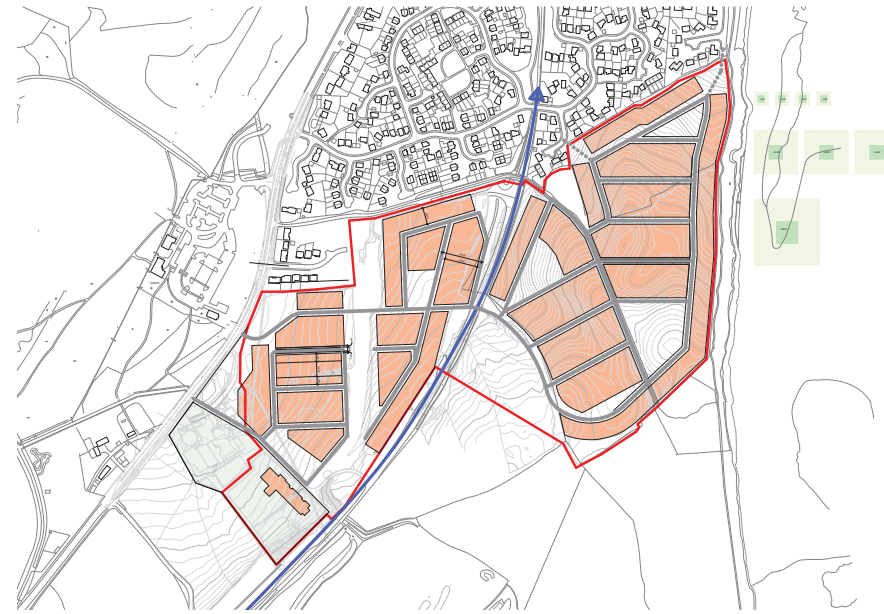
The following plans show the various working methods employed and how the masterplan layout has developed.

Initial sketch layout - Jan 2019



At this stage a single junction was considered. Introduces water at gateways as part of SUDS and also concept of taller development at head of site.

Layout and capacity check investigating densities. Two access points from Lavernock Road now preferred. Reinstates landscape corridor between lower and coastal plateaus - Feb 2019



Ascending park linking Coastal Path and Cosmeston Lakes opened up on north east corner and more defined throughout development. This switch of emphasis away from previous track is a major improvement and establishes a strong organising element within the masterplan- Mar 2019



Physical massing study testing layout options - Jan 2019



Street layout refined and hierarchy considered. Suggested feature buildings around a public square proposed on hill top. Play areas allocated. Upper plateau. Still follows historic track to RO post with intermittent hedgerows- Feb 2019

4.4 DESIGN DEVELOPMENT

Street layout further refined to suit housing layout and parking strategy - Jun 2019



Revision following DCfW Workshop in Dec 2019 and incorporating the design ideas and energy modelling outcomes from the sustainability workshops with WSA Cardiff University - April 2020



Digital massing study testing scale and mass - May 2019

Open spaces developed further and 'cluster' houses added to upper plateau - July 2019

Revisions following VOG Planning and Highways departments' comments. Further incorporation of the energy modelling and net zero strategy outcomes from the sustainability workshops with WSA Cardiff University - August- September 2020

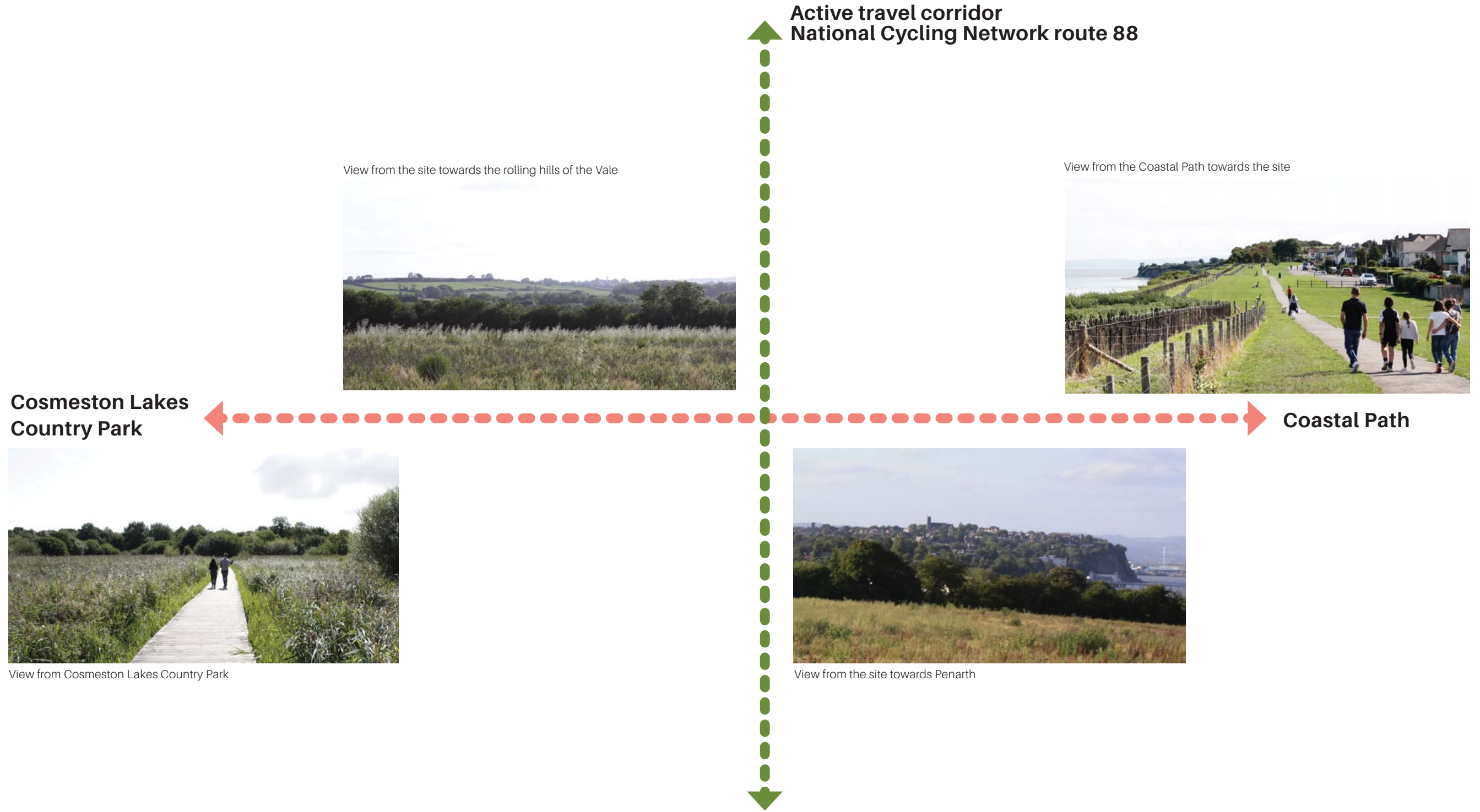


5.0 THE PROPOSAL



Aerial view above the upper plateau looking North

5.1 CONCEPT



5.1 CONCEPT

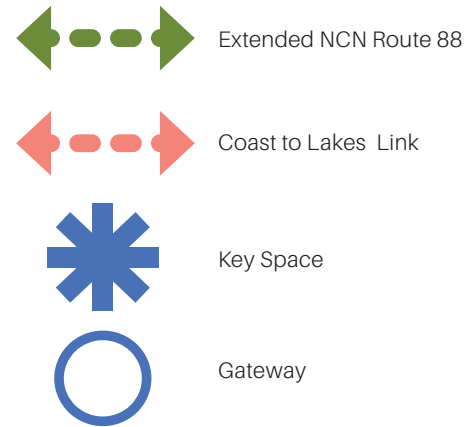
The key driver and vision of the masterplan is the opportunity to create a new link between two of Penarth's highly valued amenity spaces; the Coastal Path and Cosmeston Country Park Lakes.

Connecting these areas with an inviting pedestrian friendly route will create a loop of accessible open space for the local community and visitors. Establishing this route through the heart of the site will embed the proposed development within the wider community and help create a sense of place. It will promote a cohesive community by being integrated with its surroundings, promoting permeability and stitching together a network of open green spaces.

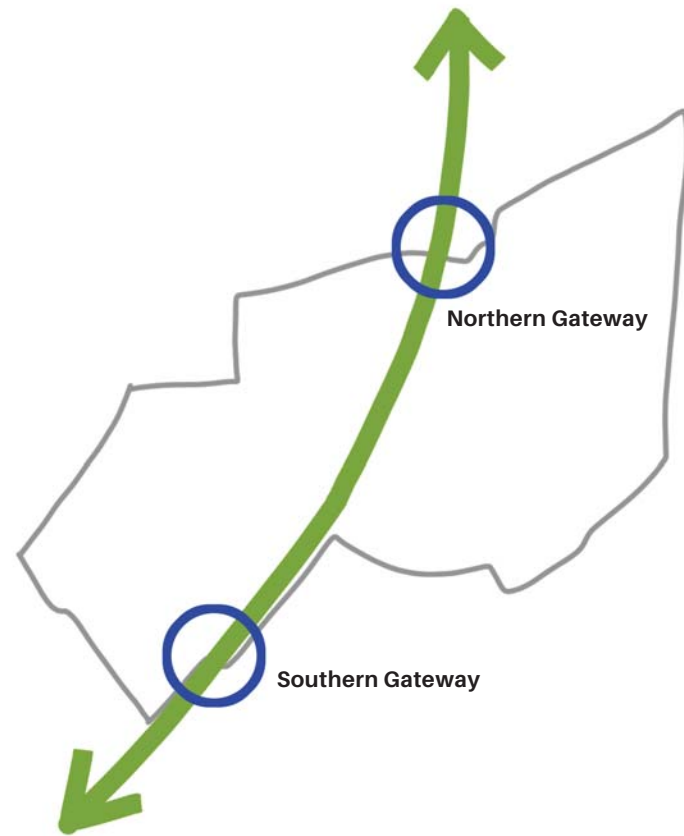
The new link will intersect with the extended National Cycling Network (NCN) route 88. This pedestrian and cyclists path will provide direct car-free connection to Penarth's town centre and rail station. The extended route 88 will be the active travel artery of the new development. The intersection of the new link and the cycle path will be celebrated with community focal point spaces.

The Masterplan is predicated on the adoption of a limited number of Key Principles.

Those Key Principles are set out in 6 steps over the following pages and summarised opposite.

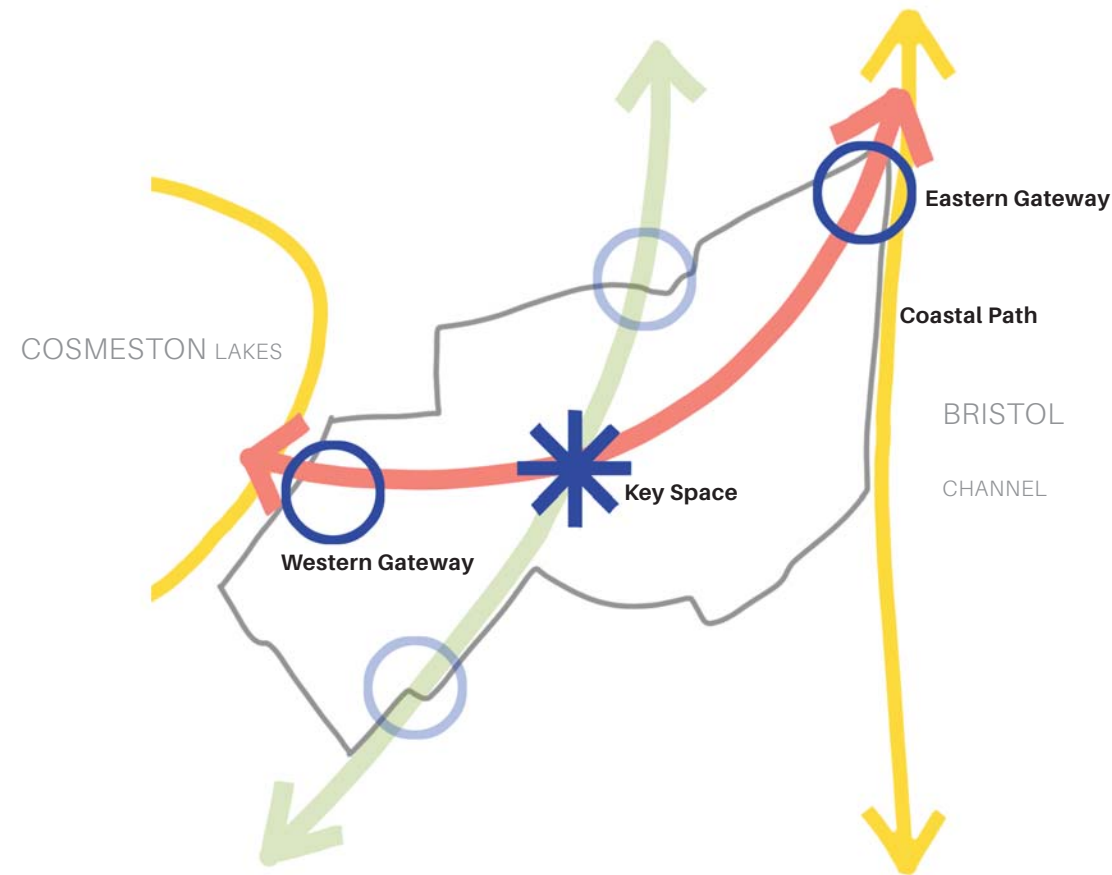


5.1 CONCEPT DIAGRAMS



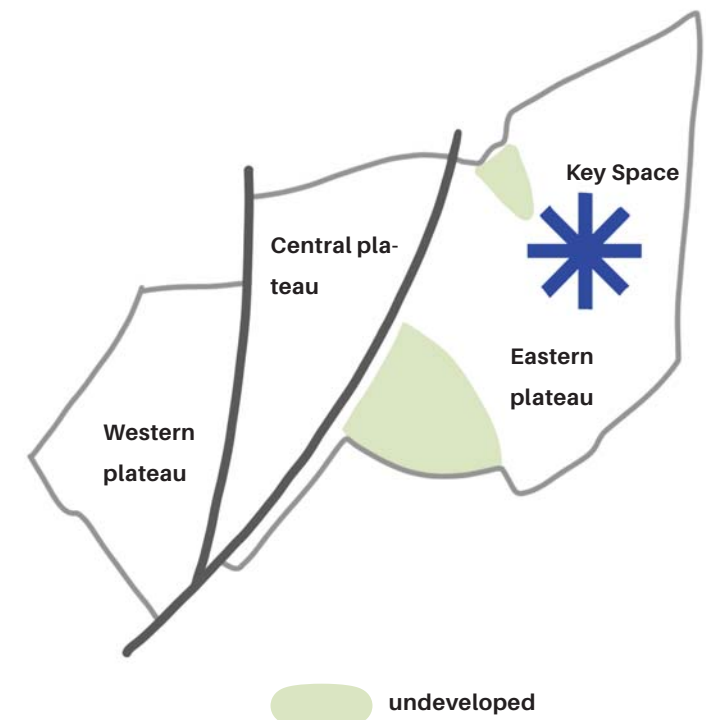
1 Extend and enhance 'Green' line cycle/pedestrian and ecological corridor (NCN Route 88)

This follows the route of a former Victorian railway line, which is already well used north of the site, leading directly to Penarth Railway Station



2 Create a strong cycle/pedestrian link between Coast and Cosmeston Lakes Country Park. Celebrate intersection with NCN Route 88 with Key Space

This is an entirely new route which initially rises from a new connection at the Eastern Gateway before falling back down to a new connection with Lavernock Road and Cosmeston Lakes opposite. NCN Route 88 takes precedence where the two routes cross.



3 Respect existing site topography and celebrate the 'high point' with Key Space. Leave landfill area and quarry area undeveloped

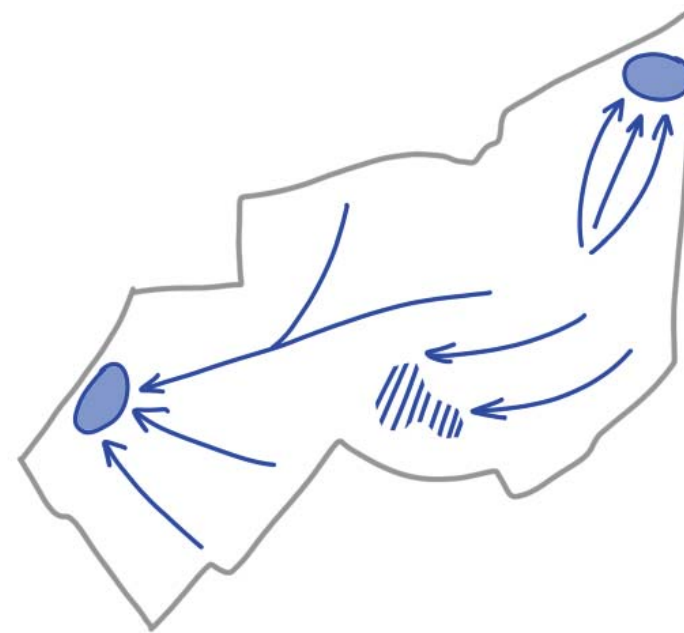
The site has three distinct plateaus created in part through former quarrying activity. The plateaus rise in elevation from west to each with a level difference of 22m.

5.1 CONCEPT DIAGRAMS



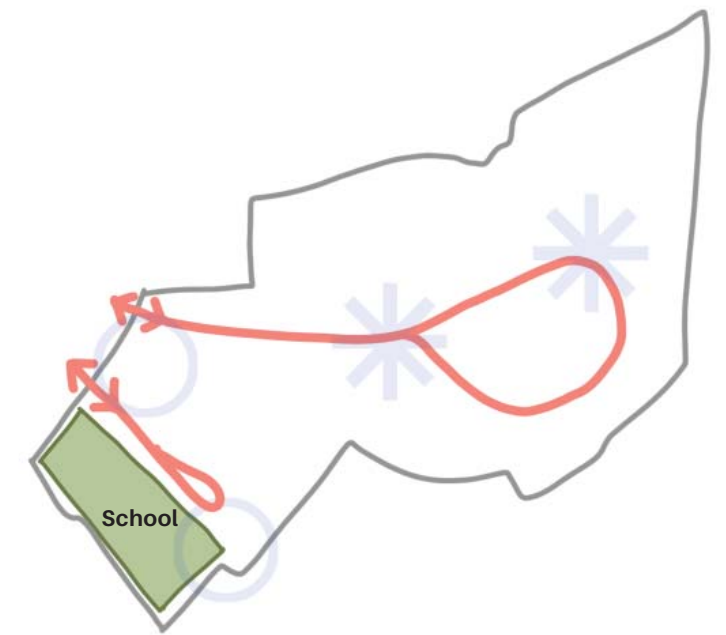
4 Retain and enhance major existing ecological corridors and create east/west nature corridors to link them

The site has significant corridors of existing trees, bushes and hedgerows, particularly along the north/south orientated plateau edges and former railway lines. There is a weaker existing network east/west.



5 Create network of sustainable urban drainage, using natural topography to new water 'features' at eastern, western gateways and at public open space

In addition to serving the practical purposes of rainwater disposal, open channels will provide a rich resource for biodiversity and shape the overall character of the development.



6 Create two vehicular access points and design to allow bus service. Vehicular route crosses plateaus where they naturally coincide. Locate school on former farm incorporating playing fields into 'Green Wedge'

Whilst the development will promote active travel, vehicular access must also be accommodated and connected to the existing road network. This occurs to the west only through two access points.