Devon Wildlife Consultants

View of Ludwell Valley Park (DWT)

Recognising and capturing the Suitable Alternative Natural Greenspace (SANG) potential of the Valley Parks

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Wildlife Trust Consultancies

Unit 2, Aldens Business Court, Chudleigh Road, Exeter EX2 8TS
01392 455930
dwc@devonwildlifetrust.org
www.devonwildlifeconsultants.co.uk

Revision	Prepared by	Authorised by	Dated
Draft for Comment	**James Woodin BSc. (Hons) ACIEEM**	**Li-Li Williams MEnvSci. (Hons) MCIEEM**	**31/05/2023**
Initial Issue	**James Woodin BSc. (Hons) ACIEEM**	**Li-Li Williams MEnvSci. (Hons) MCIEEM**	**14/11/2023**

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Executive Summary

The emerging Exeter Plan is an ambitious plan for the city over the next 20 years. It will deliver around 14,300 new homes focused on brownfield sites, protecting Exeter's existing green space and helping to deliver net zero. However, the cumulative impact of these developments has the potential to significantly increase the recreational pressures on the European designated sites adjacent to the city and have negative impacts to the wildlife dependent on them. These sites being the Exe Estuary Special Protection Area (SPA) and Ramsar site, Dawlish Warren Special Area of Conservation (SAC) and the East Devon Pebblebed Heaths SAC/SPA. In order to mitigate for the impacts of these developments, this work explores the potential for 'Suitable Alternative Natural Greenspace' (SANG) within the Valley Parks.

It has long been recognised that the Valley Parks within Exeter have the potential to provide SANG and divert people away from the European Sites. The purpose of this assessment is to establish the baseline and evaluate the potential of the Devon Wildlife Trust (DWT) managed areas of the Valley Parks to provide SANG, with reference to Natural England's SANG Guidelines (2021) for the creation of SANG. The geographic scope for the work requires evaluation of 144ha of land within the Valley Parks. The parks subject to evaluation are:

- DWT managed area of Ludwell Valley Park
- DWT managed area of Riverside Valley Park
- DWT managed area of Mincinglake Valley Park
- DWT managed area of Whitycombe Valley Park
- DWT managed area of Duryard Valley Park
- DWT managed area of Northbrook Valley Park

In order to establish the baseline of each Valley Park, data was collated and analysed from a number of secondary data providers. The collation of data from these providers enabled the baseline of each of the Valley Parks to be determined. Establishing the baseline of each valley park involved compiling data on visitor numbers, auditing the quality of infrastructure within the parks and auditing the quality of public rights of way and access routes/points into each Valley Park. The analysis and compiling of this data allowed an estimation of the current SANG capacity of each Valley Park.

These sites are assessed against Natural England's guidelines to ascertain if they currently meet the criteria to be suitable for SANG and how/if they could be enhanced to achieve suitability if they are currently unsuitable.

Following evaluation of the potential for each of the Valley Parks to provide SANG, it has been calculated that there is approximately 44.57ha of land available for SANG use within the Valley Parks. The Natural England guidance specifies that 8ha of SANG should be provided per 1,000 residents for new SANG sites. If this principle is

applied, the Exeter Valley Parks could provide SANG mitigation for approximately 5,570 new residents.

These results are based on the Natural England SANG Guidelines (2021), which is the recommended benchmark when attempting to provide countryside-type recreation in SANG sites (Liley & Panter, 2016). However, the forthcoming update to the South-East Devon European Site Mitigation Strategy (SEDESMS) - a partnership strategy for the Local Planning Authorities of East Devon, Teignbridge and Exeter to ensure that European sites are adequately protected whilst taking forward sustainable levels of growth, in appropriate locations - currently in development by Footprint Ecology envisages alternative approaches to off-site infrastructure as mitigation for European Sites.

In addition to SANG, these include a Rolling list of LPA Projects. LPA Projects comprise discrete projects such as improved footpath infrastructure or new signage which are tailored to fit with local needs for access, and are designed to function in a similar way to SANG, drawing visitors away from the European Sites. It is recognised that such projects may be particularly appropriate in the urban areas of Exeter.

This report presents options for meeting the SANG criteria and, where SANG criteria cannot be met, sets out options for LPA projects that would also deliver mitigation by drawing visitors away from the European Sites. Finally, concluding recommendations have been made in relation to each Valley Park.

It is clear that the Valley Parks are able to play a key role in mitigating for at least part of the increased recreational pressure on European sites. If the Valley Parks are to function as SANG sites in the future and provide benefits for both humans and wildlife, there is a limit to the additional recreational pressure they can absorb. It is therefore likely that in addition to the enhancement of the Valley Parks into SANG sites, other mitigation including new sites will be required to divert potential visitors away from the nearby European sites. However, the strategic location of the Valley Parks within the heart of Exeter means they are considered to play a key role in the wider South-East Devon European Site Mitigation Strategy.

Contents

1 Introduction & Purpose of Assessment 1
1.1 Introduction 1
1.2 European Protected Sites..... 1
1.3 The Role of Off-Site Infrastructure as Mitigation..... 2
1.4 Current Significance of The Valley Parks 2
1.5 Purpose of Assessment 3
2 Riverside Valley Park.....4
2.1 Introduction 5
2.2 Analysis of Visitor Numbers & Origins of Access..... 6
2.3 Site Usage..... 9
2.4 Infrastructure..... 12
2.5 Proximity to Future Local Plan Allocations 15
2.6 Analysis Against SANG Criteria..... 16
2.7 Conclusion..... 19
3 Ludwell Valley Park 20
3.1 Introduction 21
3.2 Analysis of Visitor Numbers & Origins of Access..... 22
3.3 Type of Usage..... 28
3.4 Infrastructure..... 31
3.5 Proximity to Future Local Plan Allocations 32
3.6 Analysis Against SANG Criteria..... 33
3.7 Proposed Enhancements 35
3.8 Discussion 47
3.9 Conclusion..... 47
4 Mincinglake Valley Park 48
4.1 Introduction 49
4.2 Analysis of Visitor Numbers & Origins of Access..... 50
4.3 Type of Usage..... 56
4.4 Infrastructure..... 56
4.5 Proximity to Future Local Plan Allocations 58
4.6 Analysis Against SANG Criteria..... 59
4.7 Proposed Enhancements 61
4.8 Discussion 71
4.9 Conclusion..... 71
5 Northbrook Valley Park 72
5.1 Introduction 73
5.2 Analysis of Visitor Numbers & Origins of Access..... 74
5.3 Type of Usage..... 74
5.4 Infrastructure..... 75
5.5 Proximity to Future Local Plan Allocations 77
5.6 Analysis Against SANG Criteria..... 78
5.7 Proposed Enhancements 80

5.8 Discussion 89
5.9 Conclusion 89
6 Whitycombe Valley 90
6.1 Introduction 91
6.2 Visitor Numbers & Access Points 91
6.3 Site Usage 92
6.4 Infrastructure 92
6.5 Proximity to Future Local Plan Allocations 93
6.6 Analysis Against SANG Criteria 94
6.7 Conclusion 97
7 Duryard Valley Park 98
7.1 Introduction 99
7.2 Visitor Numbers & Access Points 100
7.3 Site Usage 101
7.4 Infrastructure 102
7.5 Proximity to Future Local Plan Allocations 103
7.6 Analysis Against SANG Criteria 104
7.7 Conclusion 106
8 Additional Considerations 108
9 Summary of Options and Conclusions 111
9.1 Riverside Valley Park 111
9.2 Ludwell Valley Park 111
9.3 Mincinglake Valley Park 111
9.4 Northbrook Valley Park 111
9.5 Whitycombe Valley Park 111
9.6 Duryard Valley Park 112
9.7 Overall Conclusions 112
References 116
Appendices 118
Appendix 1 – Methodology 119
A1.1 Stage A 119
A1.2 Stage B 120
A1.3 Project Limitations 123

Acronyms

County Wildlife Site (CWS)
Devon Wildlife Trust (DWT)
Biodiversity Net Gain (BNG)
Exeter City Council (ECC)
Green Infrastructure (GI)
Local Nature Reserve (LNR)
Local Planning Authority (LPA)
Public Rights of Way (PROW)
South-East Devon European Site Mitigation Strategy (SEDESMS)
Suitable Alternative Natural Greenspace (SANG)
Special Area of Conservation (SAC)
Special Protection Area (SPA)
Special Site of Scientific Interest (SSSI)

1 Introduction & Purpose of Assessment

1.1 Introduction

Exeter is a historic, vibrant and diverse city. Encircled by ridgelines, 99km of coastline and a variety of European designated statutory sites, the residents of Exeter have excellent access to the wider landscape and coastlines surrounding the city. It is widely understood that access to Green Infrastructure (GI) provides a multitude of benefits to the physical, social and mental health of human beings (University College London, 2022). However, there is a delicate balance to be struck between the needs of human society and the requirements of nature and the wildlife that depends on it.

The emerging Exeter Plan is an ambitious plan for the city over the next 20 years. It will deliver around 14,300 new homes focused on brownfield sites, protecting Exeter's existing green space and helping to deliver net zero. However, the cumulative impact of these developments has the potential to significantly increase the recreational pressures on the European designed sites adjacent to the city and have negative impacts to the wildlife dependent on them.

1.2 European Protected Sites

The European sites within the vicinity of Exeter comprise the Exe Estuary Special Protection Area (SPA) and Ramsar site, Dawlish Warren Special Area of Conservation (SAC) and the East Devon Pebblebed Heaths SAC/SPA which are designated for a range of habitats and species including overwintering birds, extensive dune habitats and lowland heath. These sites are already popular with both residents and visitors to the county; access to these areas is vital to the local economy and is highly valued by local people.

European sites are afforded strong legal protection and local authorities have legal obligations to ensure that the impacts of development on the protected areas are mitigated appropriately. This is underpinned by The Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019.

The recreational impacts of developments on European sites, such as dog walking and excessive disturbance, are well documented within the HRA of the Exeter Plan (Outline Draft Plan), produced by Liley, *et al*, 2022. A strategic mitigation strategy - a partnership strategy for the Local Planning Authorities of East Devon, Teignbridge and Exeter to ensure that European sites are adequately protected whilst taking forward sustainable levels of growth, in appropriate locations - has been in place since 2014 (see Liley *et al*, 2014). The strategy outlines mitigation measures intended to reduce the recreational impacts of residential development within the zone of influence of the European sites. An integral part of the strategy includes the provision of 'Suitable Alternative Natural Greenspace' (SANG) to divert visitors away from the European Sites.

1.3 The Role of Off-Site Infrastructure as Mitigation

The forthcoming update to the South-East Devon European Site Mitigation Strategy (SEDESMS), currently in development by Footprint Ecology, sets out approaches to off-site infrastructure as mitigation for impact on the European Sites. These include SANG and a Rolling list of LPA Projects.

The primary purpose of SANG is to provide alternative greenspaces that are easily accessed and provide similar recreational experiences to a European site (Liley, 2015). A SANG operates to absorb a level of recreation that comprises both new residents and some existing residents, aiming to divert their use away from a European site with a new SANG available locally. The overall effect of a SANG should therefore be to avoid an increase in recreational pressure on the European site (Liley, 2015).

SANG can be delivered in two ways. Some SANGs are created by providing a new area of land for public use that has no previous history of public access. This is a particularly effective way of delivering SANG as it opens up new areas for public recreation that were previously unavailable. The alternative method for delivering SANG, is to enhance an existing site with the aim of increasing its recreational capacity and attractiveness as a viable alternative to a European site (Liley, 2015).

LPA Projects comprise discrete projects such as improved footpath infrastructure or new signage which are tailored to fit with local needs for access, and are designed to function in a similar way to SANG, drawing visitors away from the European Sites. It is recognised that such projects may be particularly appropriate in the urban areas of Exeter where it may be easier to encourage residents to use existing open space on their doorstep and where there is a particular necessity to reduce congestion and pollution by getting people out of cars and utilising existing facilities that can be accessed by foot or cycle, and there are limited opportunities to create large new greenspace. Guidance is provided in Appendix 5 of the Mitigation Strategy.

It has long been recognised that the Valley Parks within Exeter have the potential to provide SANG and divert people away from the European sites (Liley, *et al*, 2022 & Liley et al, 2014) given their strategic location; however, evidence to demonstrate their potential is currently limited. This report seeks to provide this evidence and determine the suitability of the Valley Parks to provide SANG.

1.4 Current Significance of The Valley Parks

The Exeter Valley Parks make up a significant percentage of the GI in and around the Exeter district and their value to local residents' health and wellbeing cannot be overstated. The variety of societal, environmental and ecological benefits that the Valley Parks provide has resulted in the parks being protected through local planning policy. This is delivered through Policy NE2 in the Exeter Plan Outline Draft (2022), the purpose of which is to safeguard the current functions of the Valley Parks and

ensure that residents of all new large-scale developments have easy and sustainable access to the Valley Parks by walking and cycling.

1.5 Purpose of Assessment

The purpose of this assessment is to establish a baseline and evaluate the potential of the Devon Wildlife Trust (DWT) managed areas of the Valley Parks to provide SANG, with reference to Natural England's SANG Guidelines (2021) for the creation of SANG. This work will feed into the forthcoming update to the South-East Devon European Site Mitigation Strategy currently in development by Footprint Ecology. The geographic scope for the work requires evaluation of 144ha of land within the Valley Parks. The parks subject to evaluation are:

- DWT managed area of Ludwell Valley Park
- DWT managed area of Riverside Valley Park
- DWT managed area of Mincinglake Valley Park
- DWT managed area of Whitycombe Valley Park
- DWT managed area of Duryard Valley Park
- DWT managed area of Northbrook (proposed for designation as a Valley Park)

In order to provide an evidenced approach, the Valley Park sites have been assessed against Natural England's guidelines to ascertain if they currently meet the criteria to be suitable for SANG and how/if they could be enhanced to achieve suitability if they are currently unsuitable. The capacity of each Valley Park has been calculated based on these parameters.

Enhancement options for meeting the SANG criteria have been set out and have been costed through consultation with both ECC and DWT. At sites where SANG criteria cannot be met, options have been set out that would deliver LPA projects that would also deliver mitigation by drawing visitors away from the European Sites.

The detailed methodology and justification employed to carry out this assessment is outlined in Appendix 1.

2 Riverside Valley Park

View of the River Exe from Riverside Valley Park (DWT)

Riverside Valley Park

2.1 Introduction

The Riverside Valley Park is the largest Valley Park in Exeter. The Local Plan designation, protecting the Park, stretches from Cowley Bridge at its northern extent, to Bowling Green Marsh Nature Reserve at its southern extent and encompasses an area approximately 381ha in size. The geographic scope of this work is focused on the section of Valley Park managed by DWT, specifically the area between Countess Wear Bridge and Salmonpool Bridge, which represents an area approximately 33ha in size. The boundary of the study area is outlined in Figure 2.1.

The site includes a number of foot/cycle paths and is frequently utilised by commuting cyclists, ramblers and dog walkers. Alongside human use, the park is important for biodiversity and is strategically important for wildlife, as it forms part of a wider green corridor that runs through the city. In some areas of the park, the habitats are rich enough to meet County Wildlife Site (CWS) criteria. The topography of the site is largely flat, as it is located on the River Exe floodplain. There are a range of habitats within the park including a floodplain grazing marsh complex, wet woodland, broadleaved woodland and tall ruderal vegetation. There are also areas of semi-improved grassland and large waterbodies.

Despite its naturalistic feel, the park is set within a wider urban landscape and is bound by urban environments to the north and south, meaning that it is a vital area of accessible GI in close proximity to the city centre. The park also forms part of the Exeter Green Circle, which is a 20.48km circular walking route around Exeter that takes in the Valley Parks, amenity green spaces and residential suburbs.

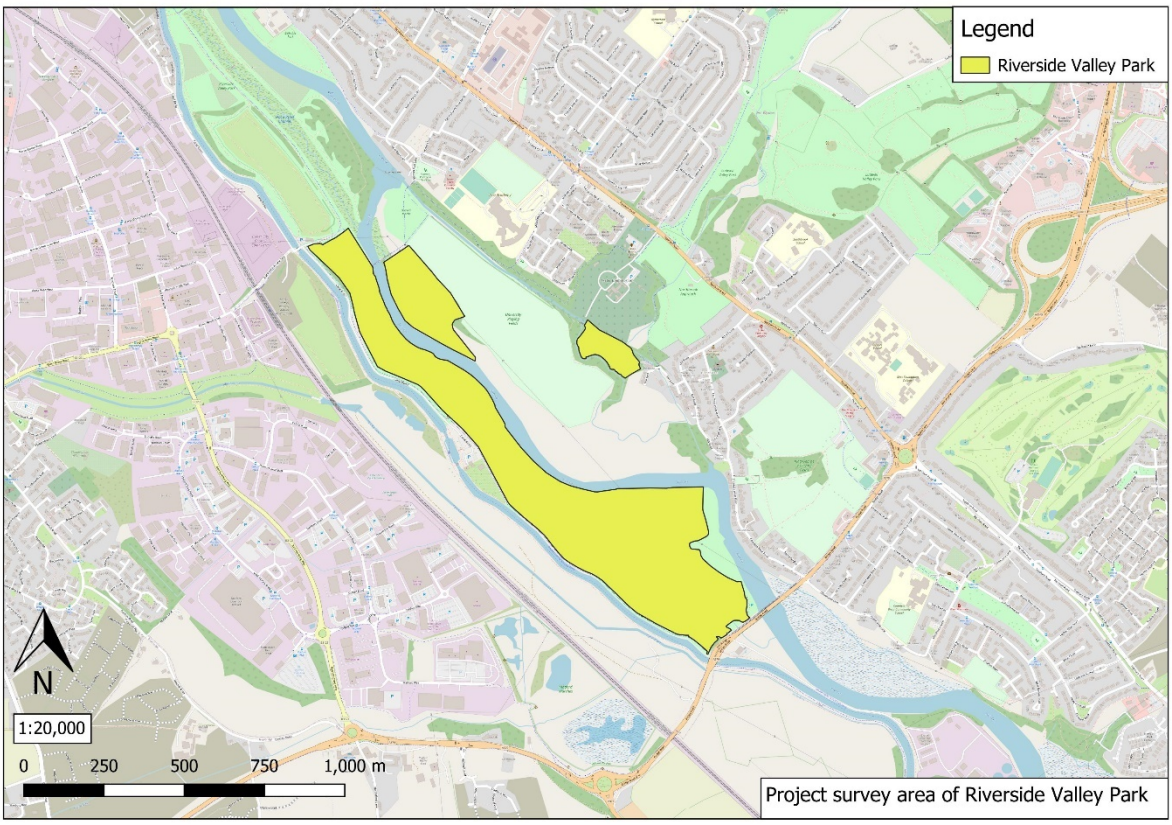

Figure 2.1 Map of study area

2.2 Analysis of Visitor Numbers & Origins of Access

2.2.1 Visitor Numbers

Riverside Valley Park is one of the busiest valley parks in Exeter. Its proximity to the city centre, the wide range of foot/cycle paths and the dog walking opportunities all make it a popular option for public recreation. Furthermore, the paved nature of many of the paths means the site is accessible to a wide diversity of people, including those with limited mobility. Liley & Panter undertook a Capacity Estimate survey in 2016 to ascertain the current level of usage. The study also examined the sites' capacity to absorb additional recreational pressure and estimated the area available for SANG provision within the site.

The study split Riverside Valley Park into two areas: Riverside Valley Park North and Riverside Valley Park South; these were assessed separately. Riverside Valley Park North is not part of this assessment and will therefore not be considered further. The Riverside Valley Park South stretches from Exeter Quay at its northern extent to Countess Wear Bridge at its southern extent and represents an area approximately 138ha in size; this area encompasses the entire 33ha DWT managed area of park, which is the subject of this study.

Data was collected through the use of sensors located on certain access points. Results from the surveys indicated that Riverside Valley Park South was noticeably

busy with an average of 5,944 people recorded entering the park per day. A summary of the number of people entering Riverside Valley Park South is presented in Table 2.1. Analysis of daily values indicated that the highest level of usage occurred at weekends with the park recording its highest number of users on a Sunday (Liley & Panter, 2016).

Area (number of sensors)	Area of the site in hectares (excluding open water)	Total people per day entering each area	Average people per day per ha entering site (b/a)	Average people per ha per hour entering site (c/12)
Riverside Valley Park South (4)	138	5,944	43	3.59

Table 2.1. Number of people entering Riverside Valley Park South (Liley & Panter, 2016)

The results from the sensor counts allowed an estimation of the capacity of the site to absorb additional recreational pressure and estimated the area available for SANG provision within the site. Liley & Panter (2016) indicate that one person per hectare per hour is a suitable benchmark/guide when attempting to provide countryside-type recreation in SANG sites. However, in many countryside sites such as the Pebblebed Heaths SAC/SPA, visiting rates are far less than one person per ha per hour and most urban parks are far busier than one person per ha per hour. The capacity estimates provided by Liley & Panter (2016) indicate that Riverside Valley Park south is considerably above the level of one person per ha per hour. The potential areas available for SANG, calculated based on the 1 person per ha per hour benchmark is presented in Table 2.2.

Area (number of sensors)	Area of the site in hectares (excluding open water) (from table 5)	Average people per ha per hour entering site (from table 5)	Hectares available for SANG use
Riverside Valley Park South (4)	138	3.59	0

Table 2.2. Potential areas available for SANG, calculated based on the 1 person per ha per hour benchmark (Liley & Panter, 2016)

As the visitor numbers are likely to be underestimates Liley & Panter (2016) suggest that Riverside Valley Park south is unable to provide SANG.

2.2.2 Visitor Origins/Access Routes

Riverside Valley Park south has a considerable number of access points. Mapping from the Riverside and Ludwell Valley Parks Masterplan (2016) highlights a total of 19 possible access points into the area studied by Liley & Panter (2016), and there may be additional unofficial/undocumented access points into the site. Liley & Panter (2016) installed sensors at a total of 4 access points in 2016 and these form the

basis of the results discussed in this section. The location of the sensor points is presented in Figure 2.2.

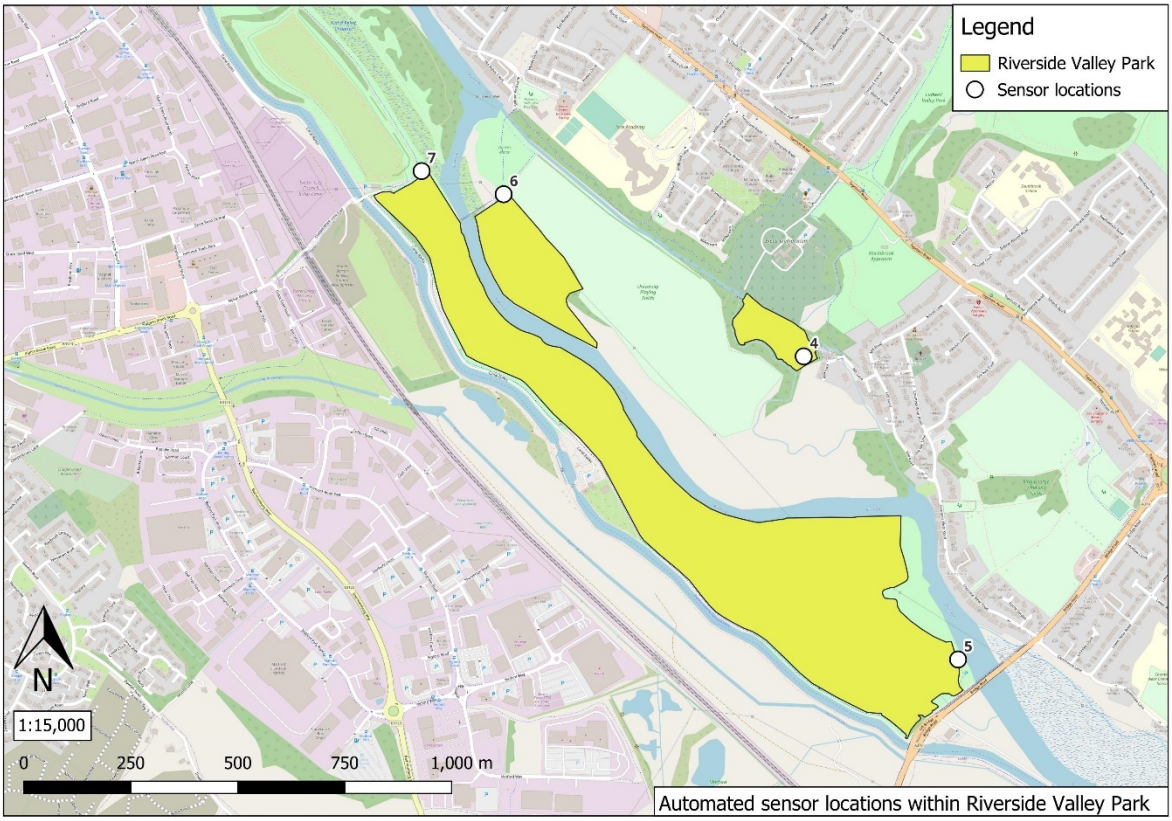

Figure 2.2 Location of sensor points

Results from the sensors indicate that Sensor ID 5 located at Bridge Road is the most frequently used access point with an average of 3,771 people entering per day. This represents 63.44% of the dataset. By contrast, footfall through the other access points was much lower ranging from between 576 to 847 people entering per day. It is important to note that the surveyed access points represent only a small proportion of the available access points. Additional access points, particularly in the north of the survey area closer to the city centre, may yield higher values. A summary of the average and maximum number of passes/people, from both raw and calibrated sensor data, is presented in Table 2.3.

In order for the data to be considered accurate, a calibration assessment was undertaken by Liley & Panter, (2016). This was necessary as a wide range of factors can determine how a sensor operates, including its sensitivity and exact placement in relation to people. These factors can result in the in the actual number of passes being detected by the sensor being higher or lower than the actual number of people passing. Furthermore, the number of passes on a sensor may not be indicative of the number of people entering the site, as the sensor will record footfall traffic in both directions.

In order to calibrate the raw sensor data, a surveyor conducted physical tally counts of the amount of people entering and leaving on two separate occasions at five of the eight sensor locations, and just once at the remaining three sensor locations. These counts were used to calculate conversion factors for the number of people being counted and for the number of people entering. Conversion factors were calculated separately for each of the calibration counts, then the average of the two conversion factors used for the final adjustment to the dataset.

Area	Sensor ID	Raw sensor data		Calibrated sensor data	
		Maximum number of passes recorded in a day	Average number of passes recorded per day	Maximum number of people entering recorded in a day	Average number of people recorded entering per day
Riverside Valley Park South	4	787	332	1,777	750
	5	889	264	12,713	3,771
	6	973	457	1,225	576
	7	917	511	1,519	847

Table 2.3. Average and maximum number of passes/people, from both raw and calibrated sensor data (Liley & Panter, 2016)

2.3 Site Usage

2.3.1 Dog Walking

Dog walking accounts for a significant proportion of the site visits at Riverside Valley Park South. Visitor interviews conducted by Liley, indicated that dog walking was the main activity undertaken by those questioned. Interviews were conducted at two access points into Riverside Valley Park South located at Countess Wear to the south and near Salmonpool Bridge to the north. The interview locations are presented in Figure 2.3. The interviews revealed 51.61% of the respondents were visiting the Valley Park for the sole purpose of dog walking.

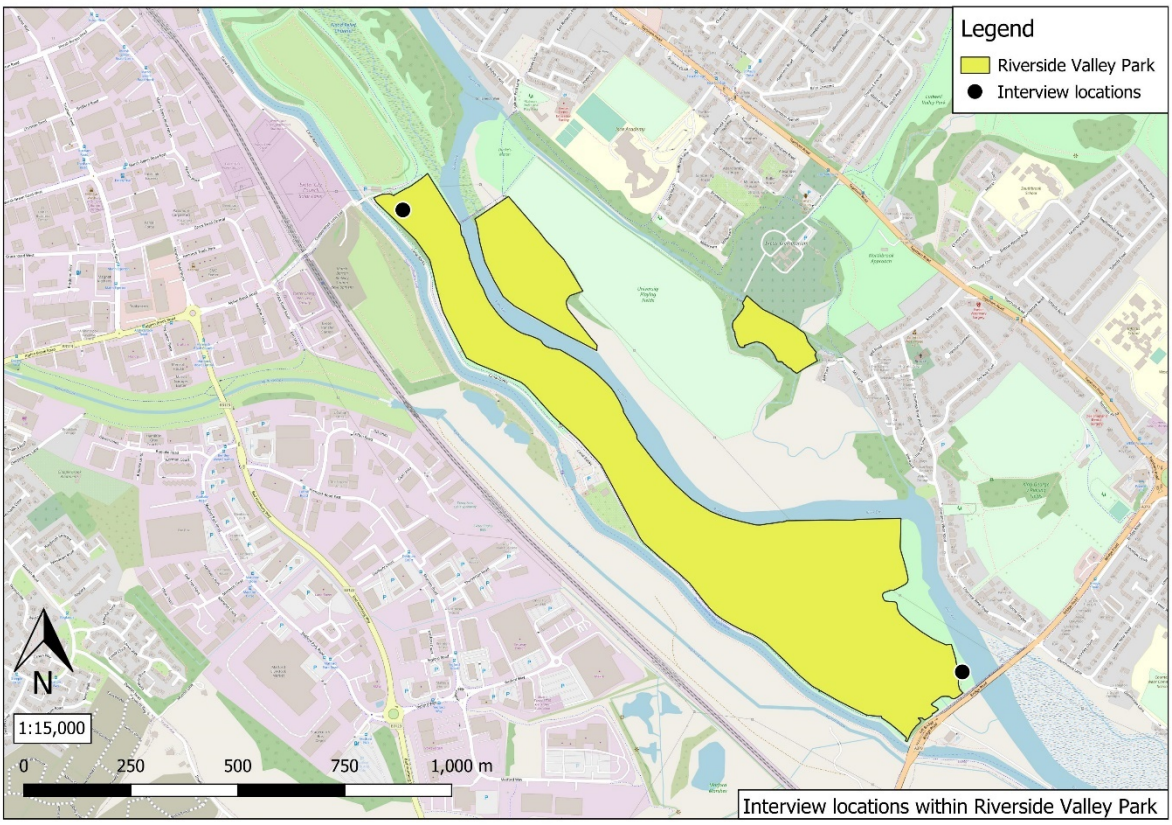

Figure 2.3 Interview locations

Dog walking is permitted in all areas of the DWT managed areas of Riverside Valley Park and is largely unrestricted. However, livestock (cattle) are present within parts of the site during the summer and dog walkers are encouraged to keep their dogs under close control or on leads when passing through areas with livestock.

2.3.2 Informal Sport/Recreation

Much of Riverside Valley Park South comprises flood plain meadows and as such is unsuitable for informal sport and recreation. A sports/playing field is present immediately to the south-west of Isca Academy, which sits within the wider designation of Riverside Valley Park. However, this is outside of the geographic scope for this work. There are no informal sport/recreation areas within the DWT managed area of Riverside Valley Park.

2.3.3 Nature Rich Areas

The habitats within the DWT managed area of Riverside Valley Park are strongly influenced by the River Exe, with a wide variety of wetland vegetation types. These habitats have been enhanced in recent years through work carried out by the Environment Agency. Waterbodies, swamp and marshy grassland sit within large stretches of semi-improved grassland, with some areas bordered by woodland. There are also a number of Habitats of Principal Importance (HPI) within the park, including reedbed, lowland fen, wet woodland and floodplain grazing marsh.

Countess Wear CWS is the only CWS within the study area and is designated for its range of habitats including a floodplain grazing marsh complex, wet woodland, broadleaved woodland and tall ruderal vegetation. Although many of the habitats are not particularly species rich, the river system is a valuable habitat and a total of six Devon notable species were recorded on the site during a survey carried out by Devon Biodiversity Record Centre (DBRC) in 2010. These include corky-fruited water-dropwort *Oenanthe pimpinelloides,* greater pond sedge *Carex riparia*, lesser reedmace *Typha angustifolia*, narrow-leaved water plantain *Alisma lanceolota*, pink water-speedwell *Veronica catenata*, common club-rush *Schoenoplectus lacustris* and galingale *Cyperus longus*.

A second CWS by the name of Grace Tip Road was identified during surveys conducted by DBRC in 2010. However, this is no longer designated as a CWS. The locations of the CWS and Priority Habitats are presented in Figure 2.4.

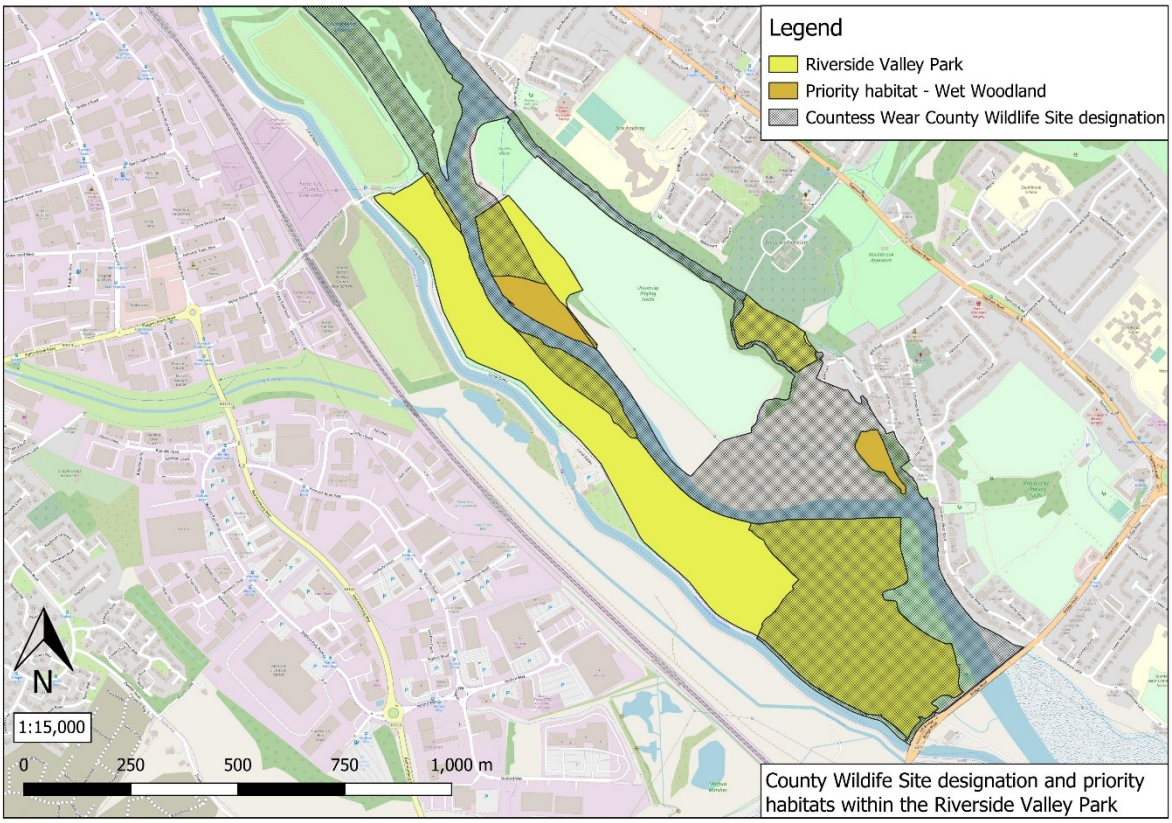

Figure 2.4 Map of CWS within Riverside Valley Park

2.3.4 Other Uses

Visitor Interviews conducted in 2015 by Liley indicated that other uses for Riverside Valley Park South include walking, cycling, outings with family/picnicking, jogging/power walking and social interactions. As a group of activities these make up 48.39% of the data set. Behind dog walking, walking was the next most popular reason to visit the Riverside Valley Park south, with 19.35% of interviewees stating

the main reason of their visit was to go for a walk. The main activity of all interviewees in Riverside Valley Park South is summarised in table 2.4.

Activity	Main activity of interviewees %
Dog Walking	51.61%
Walking	19.35%
Cycling	9.67%
Outing with family/picnicking	6.45%
Commuting/short cut	0%
Jogging/power walking	3.22%
Meet up with friends	1.61%
Other	8.05%

Table 2.4. Main activity undertaken by interviewees visiting Riverside Valley Park South.
Data provided by Liley (2015)

2.4 Infrastructure

2.4.1 Car Parking

Car parking provision within the DWT managed area of Riverside Valley Park is extremely limited, given the size of the site. DWT manage one cark in close proximity to the Double Locks Pub which can accommodate approximately 12-15 cars. Access to the car park requires crossing a narrow bridge, which may be off-putting to users with larger vehicles.

A second car park owned by ECC is located adjacent to Countess Wear, off Bridge Road in the south of the study area. This can also accommodate between 12-15 cars. The surface of the car park consists of gravel and is uneven and collects water in wet weather.

A third car park is located near Salmonpool Bridge at the northern end of the study area; this can accommodate approximately 25 cars. The car park surface is a mixture of hard standing and gravel. In places the surface is uneven and has large depressions which collect water in wet weather. Overall, the condition of surfaces in two of the car parks is poor which may be off-putting for potential visitors. A map summarising the car parks within the study area is presented in Figure 2.5.

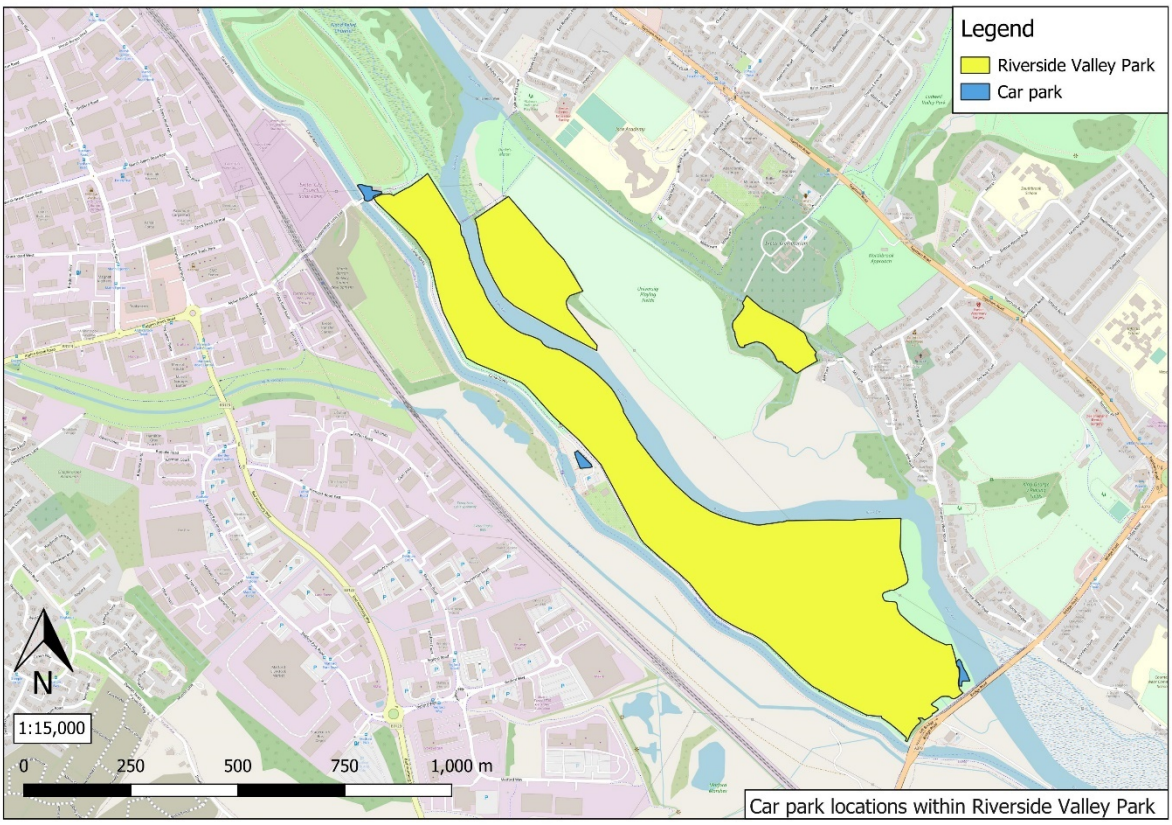

Figure 2.5 Map of car parking areas

2.4.2 Toilet Facilities

There are currently no public access toilet facilities within the DWT managed area of Riverside Valley Park.

2.4.3 Cafés & Food Establishments

The Double Locks Pub is the only permanent establishment in close proximity to the study area that provides hot drinks/food. A map showing the location of Double Locks Pub is presented in Figure 2.6.

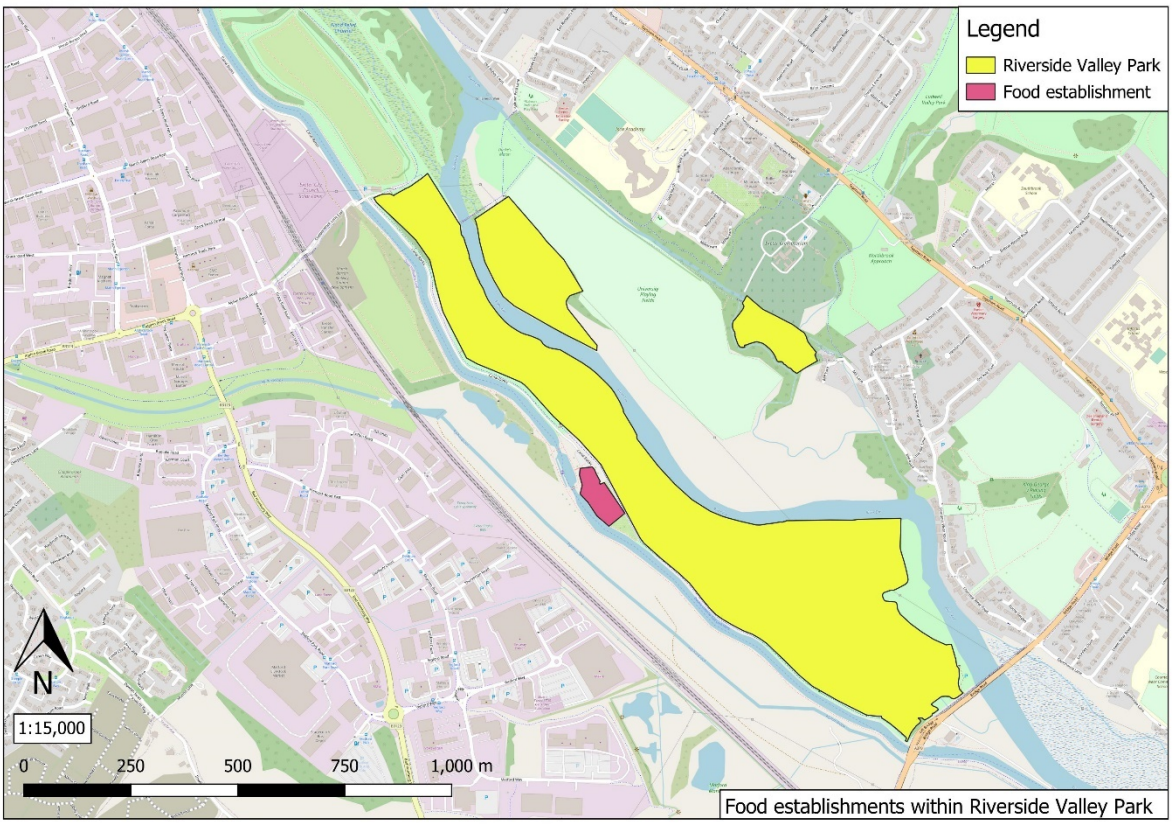

Figure 2.6 Location of Double Locks Pub

2.4.4 Access

There are a variety of Public Rights of Way (PROW) through the DWT managed area of Riverside Valley Park. The majority of the access routes are paved and run in a north to south orientation through the site. The paved access routes are in good condition with very little vegetation encroachment. Consequently, they are suitable for a variety of users including walkers, cyclists, pushchair users and people with limited mobility using mobility transport. Strategic access is provided for walking and cycling within the park by the NCN2 – Exe Estuary Trail and there are various other strategic cycle routes included in the DCC local cycling and walking infrastructure plan (DCC, 2023)

Alongside the paved access routes, there are several access routes which are unsurfaced, that also run in a north to south orientation through the site. The primary purpose of the larger unsurfaced routes is for vehicle access into the site. Despite being unsurfaced, the routes are in relatively good condition and there is very little vegetation encroachment. There are uneven sections, but overall the routes are suitable for walkers, cyclists and for people with limited mobility using mobility transport.

In addition to the official access routes, there are a number of informal routes which follow desire lines crossing the site. In most instances, these desire lines deviate

from the provided access routes to follow the bank of the River Exe. The very nature of desire lines means that the paths are uneven with some vegetation encroachment making them unsuitable for cyclists and people with mobility issues. Instead, they are likely to be best suited to walkers. A map identifying the access routes through the site including paved, unsurfaced and desire lines is presented in Figure 2.7.

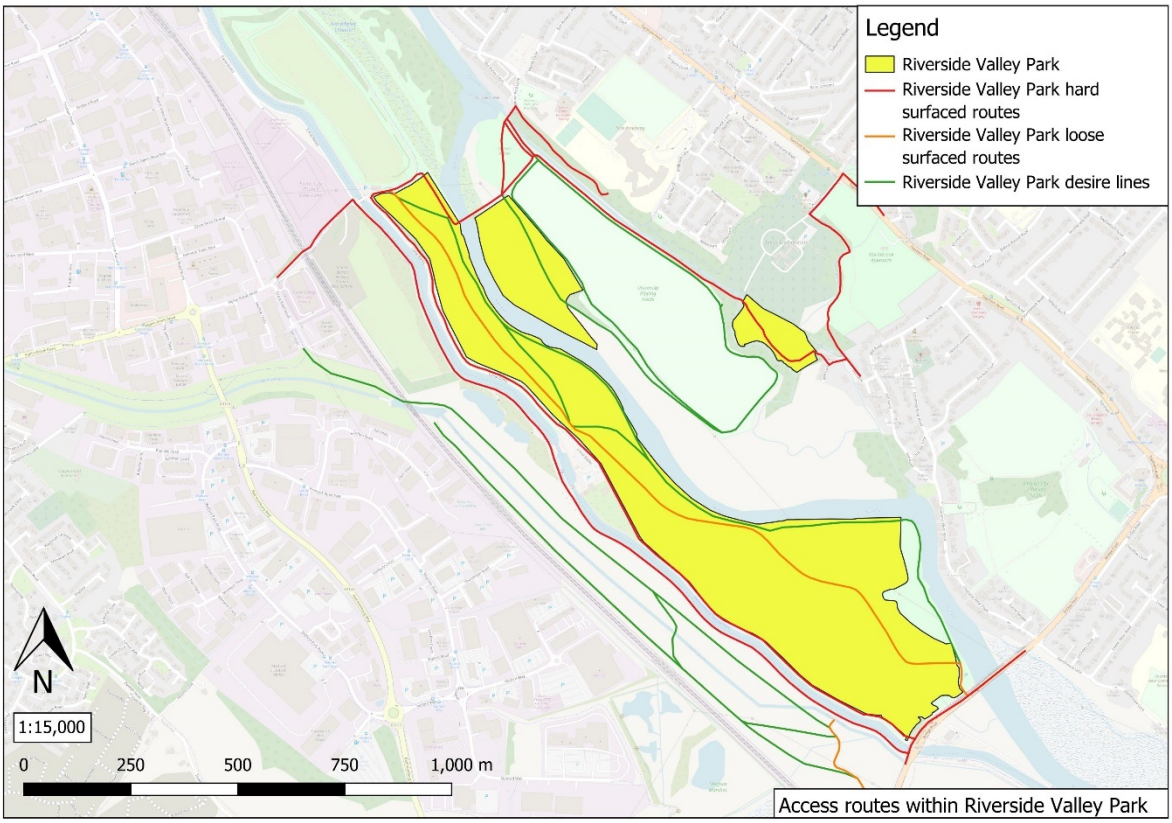

Figure 2.7 Main access routes through Riverside Valley Park (Data from Riverside & Ludwell masterplan, 2016)

2.5 Proximity to Future Local Plan Allocations

Riverside Valley Park South is directly adjacent to the proposed Local Plan allocations at Water Lane and Marsh Barton, which could together deliver approximately 2,600 new homes over the plan period. This represents a significant new number of residents living in close proximity to the Valley Park and irrespective of whether the site is suitable for SANG, visitor numbers on the site are likely to increase significantly upon completion of the development. Furthermore, a new train station has recently opened in Marsh Barton located directly adjacent to the Clapperbrook Lane entrance into the Valley Park; this is also likely to increase visitor numbers on the site. A map showing the location of the Marsh Barton and Water Lane allocations is presented in Figure 2.8.

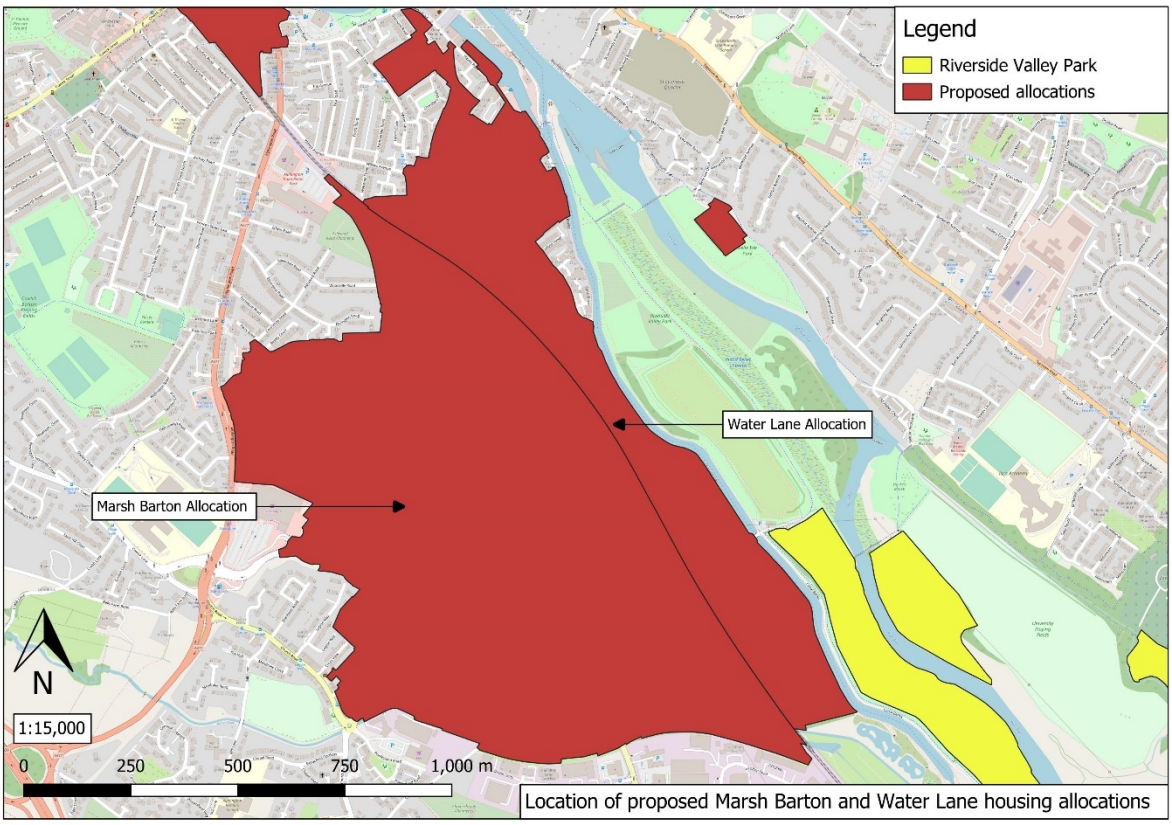

Figure 2.8 Marsh Barton and Water Lane allocations

2.6 Analysis Against SANG Criteria

The analysis of data drawn together by the current assessment has allowed for Riverside Valley Park to be assessed against the Guidelines for Creation of Suitable Alternative Natural Greenspace (SANG), (Natural England, 2021) to ascertain how many of the essential and desirable criteria the site already meets. The result of this assessment is presented in Table 2.5.

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
	1	Parking on-site	Y – Though parking on the site is limited given the size of the site.
	2	Circular walk of 2.3-2.5km	Y
	3	Car parks easily and safely accessible by car and clearly sign posted	Y - Car parks accessible by car, but are not clearly signposted from roads and access is difficult in places.
	4	Access points appropriate for particular visitor use the SANG is intended to cater for	Y

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
Essential Criteria	5	Safe access route on foot from nearest car park and/or footpath	Y
	6	Circular walk which starts and finishes at the car parks	Y
	7	Perceived as safe – no tree and scrub cover along part of walking routes	Y
	8	Paths easily used and well maintained but mostly unsurfaced	N – Most paths are surfaced
	9	Perceived as semi-natural with little intrusion of artificial structures	Y
	10	Range of habitats should be present	Y
	11	Access unrestricted – plenty of space for dogs to exercise freely and safely off the lead	Y – though owners are encouraged to keep dogs under control when moving through areas with livestock.
	12	No unpleasant intrusions (e.g., sewage treatment smells etc.)	Y –No unpleasant intrusions.
Desirable Criteria	13	Clearly sign posted or advertised in some way	Y - Clearly sign posted when on site, not sign posted or advertised from roads or nearby footpaths.
	14	Leaflets/website advertising their location to potential users	Y
	15	Can dog owners take dogs from the car park to the SANG safely off the lead	Y
	16	Gently undulating topography	Y
	17	Access points with signage outlining the layout of the SANG and routes available to visitors	Y – 3 interpretation boards. One at north and south end of the site and one in the middle.
	18	Naturalistic space with areas of open countryside and dense and scattered trees and shrubs. Provision of open water is desirable	Y
	19	Focal point such as a viewpoint or monument within the SANG	Y – River and canal.
	Total: 18/19		

Table 2.5. Riverside Valley Park south assessed against SANG criteria (Natural England, 2021)

2.6.1 Discussion

Riverside Valley Park in its current state passes 11/12 of the essential criteria needed for a site to be considered suitable for SANG provision. It also passes 7/7 of the desirable criteria giving a total score of 18/19. This indicates that the site is already providing many of the functions traditionally associated with SANG sites. However, based purely on the Natural England SANG Guidelines (2021) for new SANG sites and that one person per hectare per hour is a suitable benchmark/guide when attempting to provide countryside-type recreation, the DWT managed area of Riverside Valley Park is not suitable for SANG provision.

However, Riverside Valley Park can play a key strategic role in diverting new and existing residents in Exeter away from European sites. Future enhancements could be delivered through the Habitat Mitigation Strategy as LPA Projects. to continue to encourage future and existing residents to undertake their daily activities locally within the Valley Park, rather than in the European sites. This can be delivered through projects tailored to fit with local needs for access.

2.6.2 Possible Enhancements

There is significant value in attempting to increase the recreational capacity of the park, especially given that visitors numbers are expected to increase in the future due to nearby development allocations. Future enhancements to the site could include;

- Providing additional unsurfaced paths in underutilised areas in the south of the survey area. This could have the effect of distributing visitors more evenly within the park, reducing the likelihood of the site feeling too overcrowded.
- Improving the links, connectivity and signage between Riverside, the proposed Northbrook Valley Park and Ludwell Valley Park. At present, signage detailing a walking/cycling route between all three areas is limited and creating a more connected route between all three areas could improve the visitor experience.
- Improving signage outside of the Valley Park to better advertise the location of the Valley Park and associated car parking. At present signage detailing the locations of car parks is limited.
- Providing additional car parking facilities, where feasible.
- The creation of a visitor centre would likely encourage more visits from existing users and new users in the future. The centre could function as an educational hub as well as provide amenity services, including toilet facilities and food and drink provision.

The possibility of improving the park for water sports users could also be considered, as this is one of the activities that causes disturbance to the European sites, particularly the Exe Estuary SPA. This could include improving existing/creating new access points for water sports users within the Valley Park. It is recommended that these additional access points could be provided through partnership working with local businesses to improve access along the river. The existing water sports area at Exeter Quayside could also act as information point, with leaflets available which

detail the damage water sports activities can do to European Sites. The site would also benefit from a site warden (see Section 8.1).

2.7 Conclusion

The DWT managed area of Riverside Valley Park is clearly well used and highly valued by the residents of Exeter. The site has an open and natural feel and has a substantial variety of habitats, some of which are Habitats of Principal Importance. Visitor surveys conducted by Liley & Panter in 2015/2016 have indicated that the site is used for a variety of purposes including dog walking, walking and cycling. These surveys also revealed that usage of the site is already at a very high level.

However, there are potential enhancements/projects that will spread visitors more evenly across the Riverside Valley Park, reducing the busy feel of the site. Given the proximity of the park to the city centre and future developments, it is likely to play a key strategic role in diverting people away from European sites, regardless of the current level of site usage. There is therefore likely to be significant value in attempting to increase the recreational capacity of the park, especially given that the local population is expected to increase in the future. These projects should feed into the update of the Mitigation Strategy.

3 Ludwell Valley Park

Wildflower Meadow in Ludwell Valley Park (DWT)

Ludwell Valley Park

3.1 Introduction

The Ludwell Valley Park is a large Valley Park in Exeter. The Local Plan designation, protecting the Park, encompasses an area approximately 88ha in size. However, the geographic scope of this work is focused on the areas of park that are managed by DWT, which represents an area approximately 54ha in size. The boundary of the study area is outlined in Figure 3.1.

Much of the park is a working farm in the east of the city and comprises a mixture of arable fields, species-rich hedgerows, semi-improved grassland, unimproved grassland, woodland and traditional orchards. The park is also strategically important for wildlife as it forms part of a wider green corridor that runs through the city. In some areas of the park, the habitats are rich enough to meet CWS criteria. The site is set within a wider urban landscape and is primarily bounded by residential development. Consequently, the park is an important area of accessible GI for local residents and many visitors use the site for the purpose of dog walking.

The topography of the park is rather mixed, ranging from large gently undulating areas in the eastern extent of the site to very steep sections on its western edge. This provides users with a unique visitor experience, giving them the sense of walking through the countryside, whilst in reality users are in close proximity to the city centre surrounded by residential development. The steep areas provide sweeping views across the city and beyond to the ridgelines and hills encircling the city. The park is also immediately adjacent to part of the Exeter Green Circle, which is a 20.48km circular walking route around Exeter that takes in the Valley Parks, amenity green spaces and residential suburbs.

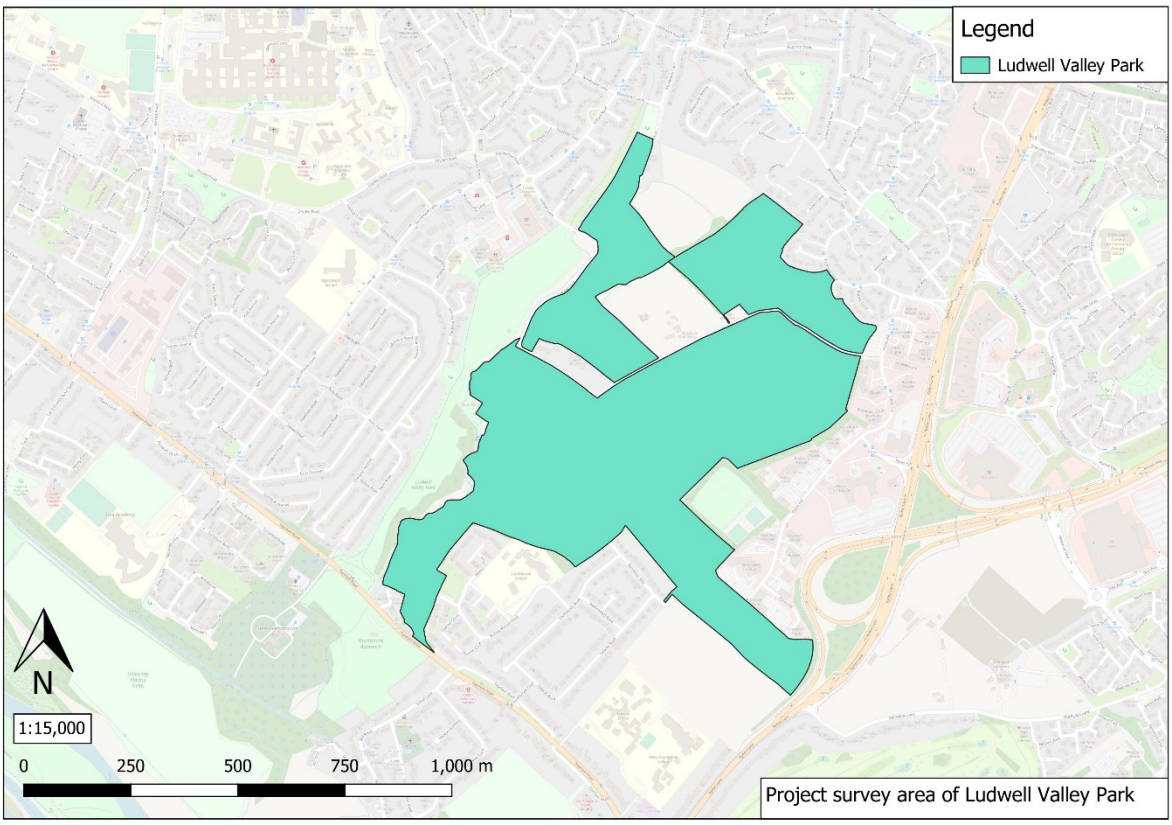

Figure 3.1 Map of Study Area (DWT managed area of Ludwell Valley Park)

3.2 Analysis of Visitor Numbers & Origins of Access

3.2.1 Visitor Numbers (Data Gathered by Liley & Panter, 2015/16)

Ludwell Valley Park is a much quieter Valley Park than Riverside Valley Park. This is likely due to a combination of factors including the steep topography, its position within the city and the varying condition of the footpaths. However, the park is still a popular location for dog walkers and ramblers, and it provides an area of tranquillity within an urban environment. Liley & Panter undertook a Capacity Estimate survey in 2016 to ascertain the current level of usage of the site. The study also examined the capacity of the sites to absorb additional recreational pressure and estimated the area available for SANG provision within the site. The study area comprised the majority of the Valley Park designation and encompassed an area approximately 85ha in size. This area encompasses the entire 53.67ha DWT managed area of park, which is the subject of this study.

Data was collected through the use of three sensors located on certain access points into the Valley Park. Results from the surveys indicated that site is far less busy than Riverside Valley Park with an average of 535 people entering the site each day. A summary of the number of people entering Ludwell Valley Park is presented in Table 3.1. Analysis of daily values indicated that usage of the site throughout the week was relatively even, with two sensors recording their highest values on a Monday and Tuesday and a third sensor recording its highest value on a Saturday. Due to the

coverage of sensors and limitations of the study, it is likely that visitor numbers are underestimates, as the visitor count data do not include all of the available access points into the park (Liley & Panter, 2016).

Area (number of sensors)	Area of the site in hectares (excluding open water)	Total people per day entering each area	Averaged people per day per ha entering site (b/a)	Average people per ha per hour entering site (c/12)
Ludwell Valley Park (3)	85	535	6.3	0.52

Table 3.1 Number of people entering Ludwell Valley Park South (Liley & Panter, 2016)

The results from the sensor counts allowed an estimation of the capacity of the site to absorb additional recreational pressure and estimated the area available for SANG provision within the site. The capacity estimates provided by Liley & Panter, (2016) indicate that an average of 0.52 people per ha per hour entered Ludwell Valley Park throughout the survey period. This is below the 1 person per ha per hour guide for SANG sites as outlined by Liley & Panter (2016). The results from the study therefore indicate there is additional recreational capacity with Ludwell Valley Park and the potential areas available for SANG, calculated based on the 1 person per ha per hour benchmark is presented in Table 3.2.

Area (number of sensors)	Area of the site in hectares (excluding open water)	Average people per ha per hour entering site (from table 5)	Hectares available for SANG use
Ludwell Valley Park (3)	85	0.52	40.8

Table 3.2 Potential areas available for SANG, calculated based on the 1 person per ha per hour benchmark (Liley & Panter, 2016)

However, as the visitor numbers are likely to be underestimates Liley & Panter, (2016) it is suggested that 30ha may be a better estimate of the available SANG capacity at Ludwell Valley Pak.

3.2.2 Visitor Numbers (Data Gathered by Devon County Council, 2021/22)

More recent data gathered as part of the Exeter Green Circle Monitoring Surveys in 2021/22 has also been analysed to ascertain whether Ludwell Valley Park still has capacity for SANG provision (as indicated by Liley & Panter (2016).

Data was collected through the use of a video camera at one location, near the Panny Path footbridge, that allows access into the DWT managed area of Ludwell Valley Park. The video camera recorded users moving in three directions, however for the purposes of this assessment, only users crossing Panny Path Bridge and entering the DWT managed area of Ludwell Valley Park have been used to calculate available capacity. This is in keeping with the methodology employed by Liley &

Panter (2016) and will ensure data is more comparable. Despite this, the data gathered by the Green Circle Monitoring has limitations, as there was only one location subject to assessment. Consequently, the data do not represent all the possible access points and visitor numbers are likely to be underestimates. Visitor data was acquired on a Friday, Saturday and Sunday in both 2021 and 2022 and therefore represents a snapshot of site usage throughout a week. The location of the survey camera is presented in Figure 3.2

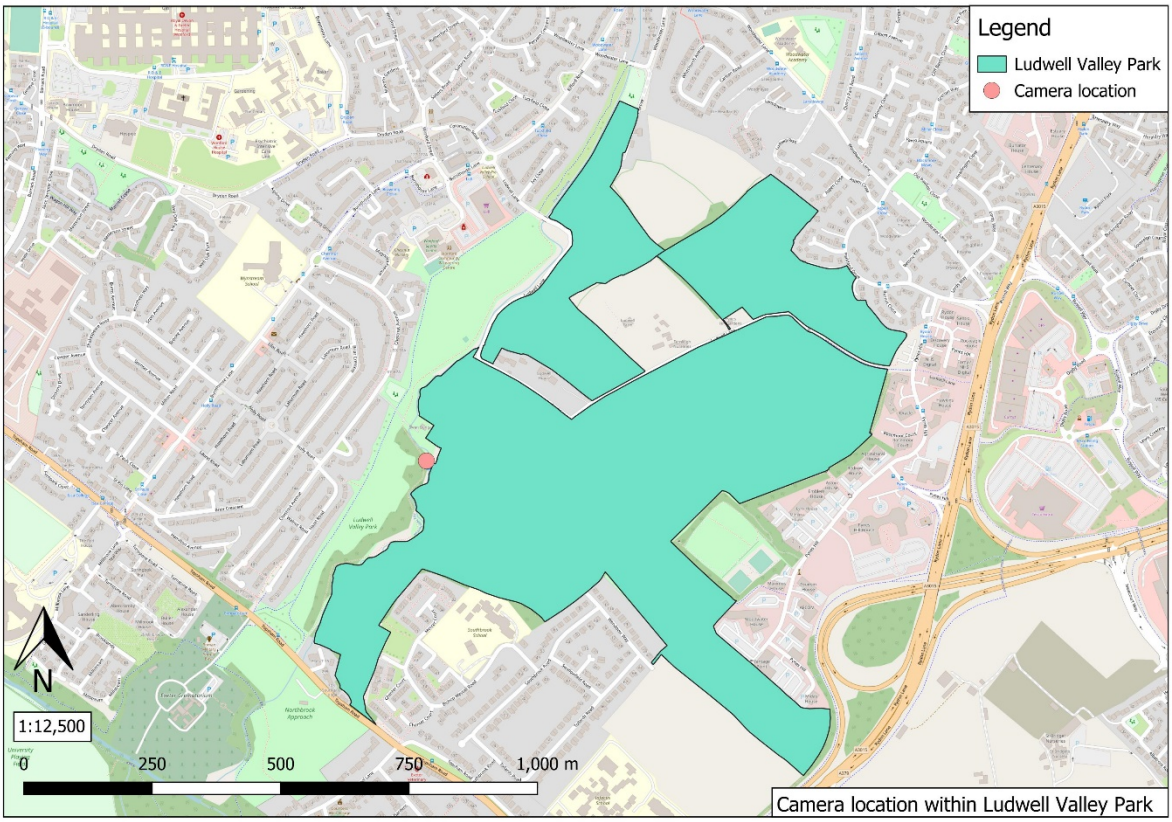

Figure 3.2 DCC Camera Location within Ludwell Valley Park

A series of calculations have been made to estimate the current usage and future of capacity of the site to absorb additional recreational pressure. Results from the Green Circle Monitoring surveys also indicated that the site is far less busy than Riverside Valley Park with an average of 167 people entering the site each day in 2021 and an average of 178 people entering the site in 2022. A summary of the number of people entering Ludwell Valley Park at Panny Path Bridge in 2021/22 is presented in Table 3.3.

Date (Number of survey points)	Size of DWT managed area of VP	Average number of people entering site per day	Averaged people per day per ha entering site	Average people per ha per hour entering site
2021 (1)	53.67	167	3.11	0.20
2022 (1)	53.67	178	3.31	0.22

Table 3.3 Average number of people entering Ludwell Valley Park per day with estimations of the average number of people entering per ha per hour (Data provided by DCC)

The results from the data collected by DCC allowed an estimation of the capacity of the site to absorb additional recreational pressure and estimated the area available for SANG provision within the site. The capacity estimates calculated by Devon Wildlife Consultants, indicate that an average of 0.20-0.22 people per ha per hour entered Ludwell Valley Park during the survey period in 2021/22. This is below the 1 person per ha per hour guide for SANG sites as outlined by Liley & Panter (2016). The results from these calculations indicate there is still additional recreational capacity within Ludwell Valley Park. The potential areas available for SANG, calculated on the 1 person per ha per hour benchmark is presented in Table 3.4

Date (Number of survey points)	Size of DWT managed area of VP (ha)	Averaged people per ha per hour entering site	Hectares available for SANG use
2021 (1)	53.67	0.20	42.93
2022 (1)	53.67	0.22	41.86
Average of 21/22	53.67	0.21	42.39

Table 3.4 Average number of people entering Ludwell Valley Park per day with estimations of the average number of people entering per ha per hour (Data provided by DCC, 2021/22)

The figures in Table 3.4 represent the possible SANG that might be available in Ludwell Valley Park. However, the visitor data represents a small percentage of the available access points into Ludwell Valley Park. It is therefore likely that visitor numbers are underestimates and the hectares available for SANG are overestimates. The survey point in the DCC Survey was located at the same point as Sensor ID 3 in the study conducted by Liley & Panter (2016). In that study, the sensor accounted for 59.7% of the average number of people entering the site each day. If the DCC survey had surveyed the same three locations as Liley & Panter (2016), it is assumed the survey point located at near Panny Path bridge would have accounted for 59.7% of the average number of people entering the site each day. Making this assumption allows for the data between to the studies to be compared.

With this assumption in place, the average number of people entering the site per ha per hour would increase from 0.21 to 0.35, therefore reducing the hectares available for SANG from 42.39ha to 34.88ha. In order for this data to be compared more accurately against the data collected by Liley & Panter (2016), the same limitations

need to be applied. Liley & Panter estimated that their initial calculation of the area available for SANG was an overestimate of 26%. This was due to the sensor locations not covering every conceivable route through the site, meaning that some people would have entered and exited the site without being counted by the sensors. If this same limitation is applied the DCC data, then the hectares available for SANG is reduced from 34.88ha to 25.81ha. A summary of the estimated hectares available for SANG from the two datasets is presented in Table 3.5.

Data provider & date of survey	Assumed site area (ha)	Hectares available for SANG use (prior to 26% calibration reduction)	Hectares available for SANG use (following 26% reduction calibration)
Liley & Panter, 2016.	80.00	40.8	30.0
DCC, Average of 2021/22.	53.67	34.88	25.81

Table 3.5 Summary of the estimated hectares available for SANG from the two available data sets

The results from the comparisons between the two datasets, indicates that there has been a marginal increase in footfall at Ludwell Valley Park between 2016 and 2021/22 and this has resulted in an overall reduction in the hectares available for SANG use. The average of the 2021/22 surveys conducted by DCC indicate that there is currently 25.81ha available for SANG in Ludwell Valley Park. The Natural England guidance specifies that 8ha of SANG should be provided per 1,000 residents for new SANG sites. If this principle is applied to Ludwell Valley Park, the site could provide SANG mitigation for approximately 3,226 new residents in Exeter.

Whilst every effort has been made to accurately compare the data between the two studies, there are limitations within the datasets and to the comparisons. Liley & Panter (2016) made calculations based on a total site area of 80ha. By contrast, the calculations made by DWC have focused only on the DWT managed area of Ludwell Valley Park which equates to 53.67ha. This represents only 66.25% of the area assessed by Liley & Panter. This is why a precautionary approach has been taken with the lower value being taken after extrapolation.

The results from the capacity estimates indicate that there is scope for Ludwell Valley Park to absorb additional recreational pressure. The most recent data indicates that the park could provide 25.81ha for SANG provision and this could provide SANG mitigation for approximately 3,226 new residents.

3.2.3 Visitor Origins/Access Points

Ludwell Valley Park has a significant number of access points. Mapping from the Riverside and Ludwell Valley Parks Masterplan (2016) highlights a total of 22 possible access points into the area studied by Liley & Panter (2016) and there may

be additional unofficial/undocumented access points into the site. Many of the identified access points have never been surveyed to ascertain the numbers of people utilising them. Liley & Panter (2016) installed 3 sensors covering 3 different locations; these form the basis of the results discussed in this section. The location of the sensor points is presented in Figure 3.3.

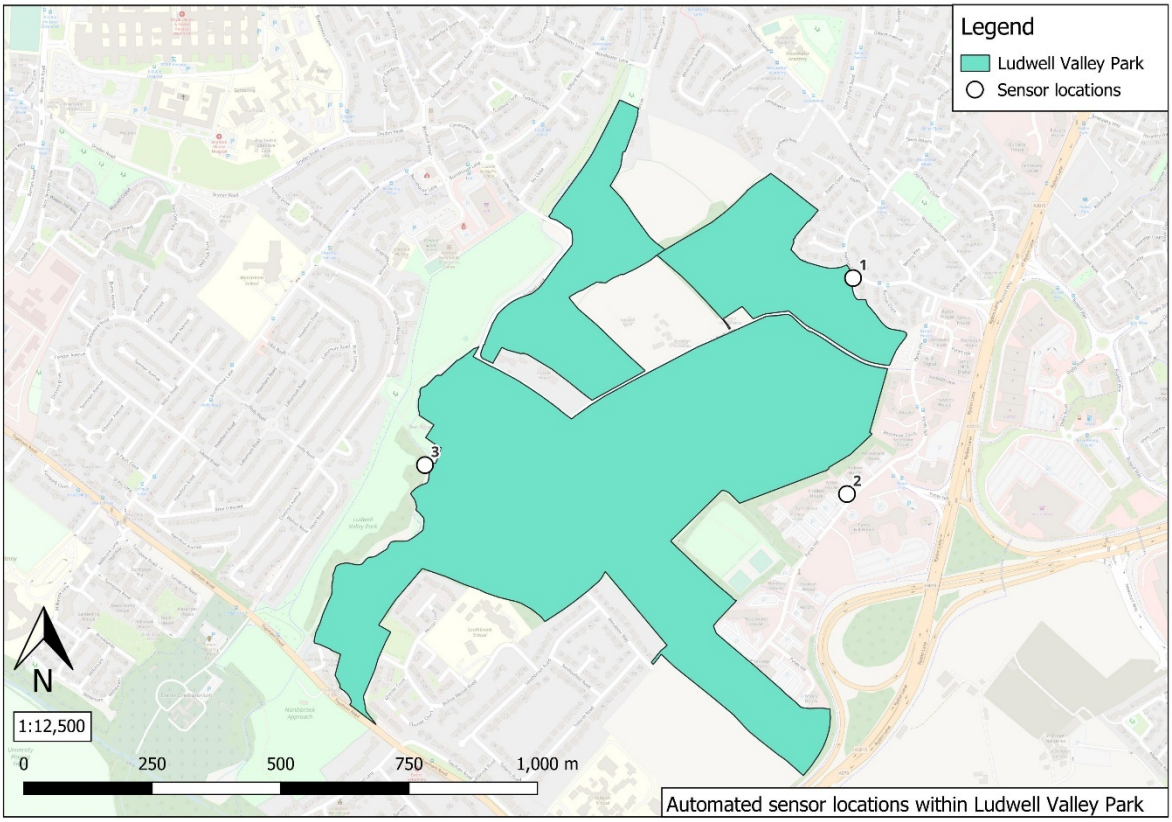

Figure 3.3 Sensor data locations

Results from the sensors indicate that Sensor ID 3 located at Bridge Road had the highest level of footfall with an average of 320 people entering per day. This represents 59.70% of the dataset. By contrast, footfall at the other counter locations was lower ranging from between 64 to 152 people per day entering the site. It is important to note that the locations of the sensors represent only a small proportion of the available access points. Other, un-surveyed access points could yield higher values. A summary of the average and maximum number of passes/people, from both raw and calibrated sensor data, is presented in Table 3.6. Details of calibration are presented in Section 2.2.2.

Area	Sensor ID	Raw sensor data		Calibrated sensor data	
		Maximum number of passes recorded in a day	Average number of passes recorded per day	Maximum number of people entering recorded in a day	Average number of people recorded entering per day
Ludwell Valley Park	1	197	110	271	152
	2	229	124	117	64
	3	317	200	507	320

Table 3.6 Average and maximum number of passes/people, from both raw and calibrated sensor data (Liley & Panter, 2016)

Data collected by DCC through the Green Circle Monitoring Surveys in 2021/22 only collected data at one location within the park. Whilst this location was the same location that Sensor ID 3 was placed by Liley and Panter (2016), the lack of data from any other access points means there is limited value in comparing the datasets.

3.3 Type of Usage

3.3.1 Dog Walking

Dog walking accounts for a significant proportion of the site visits at Ludwell Valley Park and this area encompasses the entire 53.67ha DWT managed area of park. Visitor interviews conducted by Liley (2015), indicated that dog walking was the main activity undertaken by those questioned. Interviews were conducted at one location within Cuckoo Field. The location of the interview location is presented in Figure 3.4 The interviews revealed 93.64% of the respondents were visiting the Valley Park for the sole purpose of dog walking.

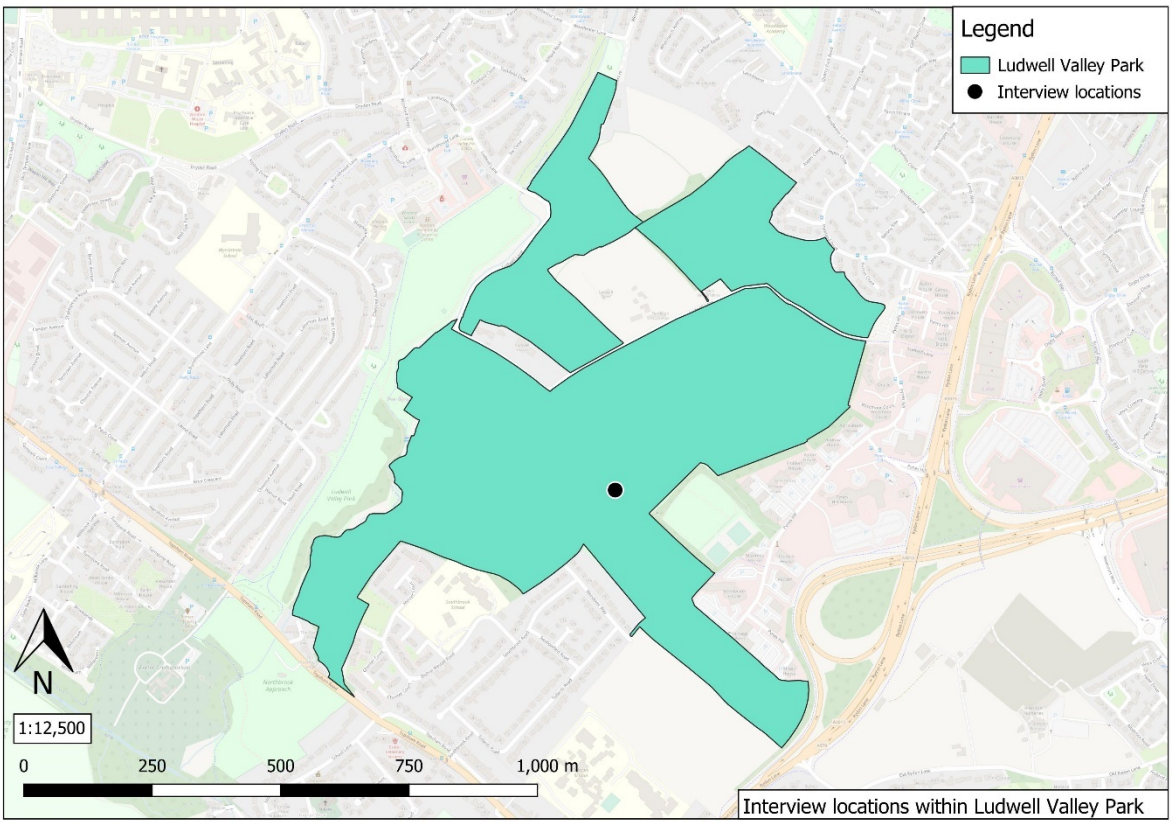

Figure 3.4 Interview locations

Dog walking is permitted in all areas of the Valley Park and is largely unrestricted. However, livestock (cattle) are present within parts of the site during the summer and dog walkers are encouraged to keep their dogs under close control or on leads when passing through areas with livestock.

3.3.2 Informal Sport/Recreation

A large part of Ludwell Valley Park is a working farm comprising a mixture of arable fields, species-rich hedgerows, grasslands, woodland and traditional orchards. Consequently, the park is largely unsuitable for informal sport/recreation and there are no areas of informal sport/recreation present within the DWT managed area of the park. There are amenity grassland areas suitable for recreation adjacent to the DWT managed areas of the park and these sit within the wider designation of Ludwell Valley Park. However, these areas are outside of the geographic scope for this work.

3.3.3 Nature Rich Areas

Ludwell Valley Park is a wildlife rich park, part of which is a working farm with a significant variety of habitats. Many of these habitats are designated as Priority Habitats/Habitats of Principal Importance and are of significant value in themselves and to protected species. As a result, a significant proportion of the site is designated a CWS and this encompasses an area approximately 41.7ha in size. Much of the

DWT managed area of the park is located within this designation. The location of the CWS and Priority Habitats within Ludwell Valley Park is presented in Figure 3.5

Monitoring data provided by DBRC (2021) indicate that the priority habitats within the park and CWS include unimproved calcareous/neutral grassland, traditional orchards, secondary woodland, semi-natural wet woodland and broadleaved woodland. There are numerous species-rich native hedgerows that make up the field boundaries and these support a variety of nesting birds. Historically these hedgerows supported cirl bunting *Emberiza cirlus*, however recent survey results suggest that they are now absent from some areas of the park. The priority habitats on the site also support seven Devon Notable plant species including corncockle *Agrostemma githago*, corn chamomile *Anthemis arvensis*, cornflower *Centaurea cyanus*, grass vetchling *Lathyrus nissolia*, corky-fruited water-dropwort, bee orchid *Ophrys apifera* and cowslip *Primula veris*.

Alongside these priority habitats, there are significant areas of non-priority habitat within the park. These areas predominantly comprise large swathes of semi-improved grassland and arable fields with smaller areas of young orchards and plantation woodland. The Northbrook watercourse also flows through the woodland on the eastern extent of the site.

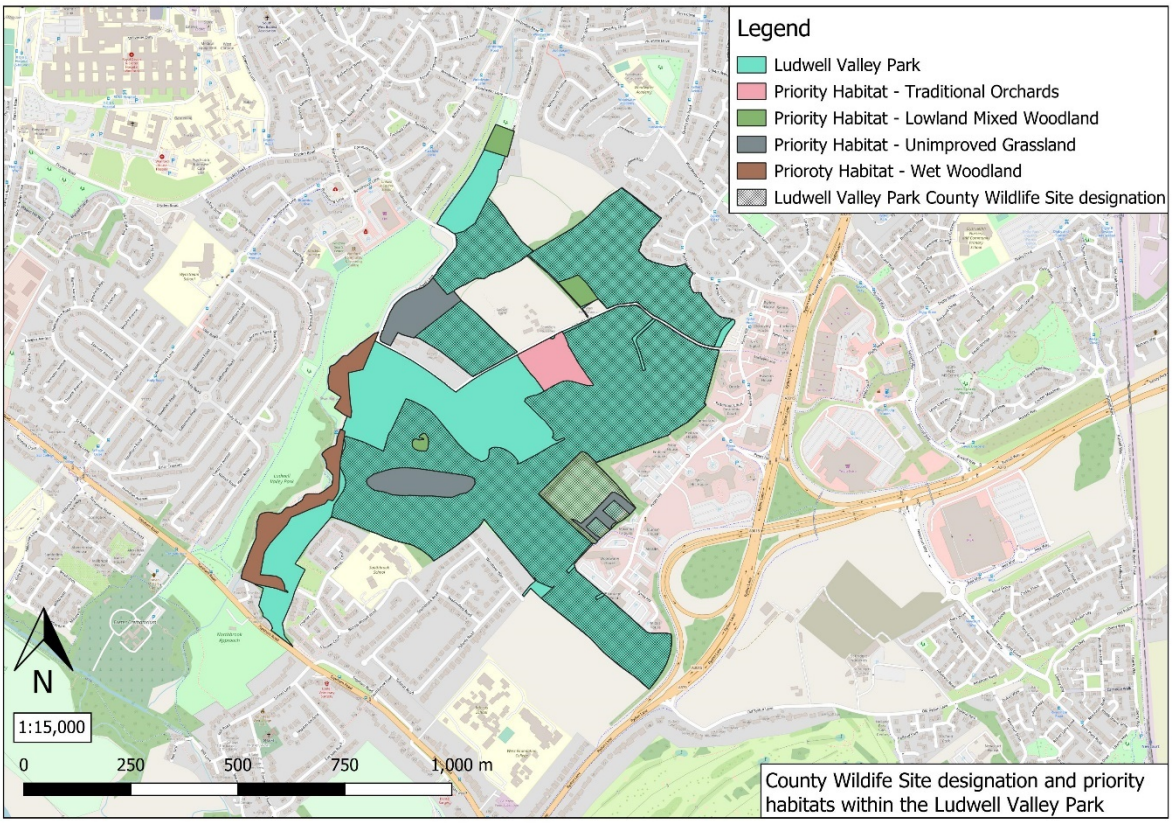

Figure 3.5 Map of CWS habitats in Ludwell Valley Park

3.3.4 Other Uses

Visitor interviews conducted in 2015 by Liley, indicated that the majority of users visited Ludwell Valley Park for the principal purpose of dog walking and there were only two other responses given. These were ‘walking’ and ‘other please detail’. The main activity of all interviewees in Ludwell Valley Park is summarised in Table 3.7.

Activity	Main activity of interviewees %
Dog Walking	93.6%
Walking	3.2%
Other, please detail	3.2%

Table 3.7 Main activity undertaken by interviewees visiting Riverside Valley Park South. Data provided by Liley (2015)

3.4 Infrastructure

3.4.1 Car Parking

Car parking provision at Ludwell Valley Park is extremely limited, given the size of the site. At present, there are no official car parks on the site and parking is limited to the surrounding residential areas, which frequently have on-street parking restrictions. It is possible that some users may utilise the nearby supermarket and sports centre car parks for short trips to the site, but this is not officially permitted.

3.4.2 Toilet Facilities

There are currently no public access toilet facilities within Ludwell Valley Park.

3.4.3 Cafés & Food Establishments

There are currently no cafés/food establishments within the study area that provide hot food and drink.

3.4.4 Access

There are a variety of Public Rights of Way (PROW) and access routes through Ludwell Valley Park. Many of these routes have been mapped in the Riverside and Ludwell Masterplan (2016). The majority of the routes in the park consist of desire lines which are unsurfaced, unpaved routes, which vary in quality considerably and are often muddy in periods of wet weather. This is particularly pronounced on the steeper sections of the site. Whilst this gives the park a naturalistic feel, the result is that many of the routes through the site are only suitable for able bodied users and access is difficult for pushchair users and people with limited mobility using mobility transport.

In flatter regions of the park, particularly towards the western extent of the site, there are loose surfaced paths and these pass through areas of woodland and adjacent to the Northbrook watercourse. The loose surfaced paths consist of a gravel and unconsolidated soil meaning that the paths are more suited for pushchair users and people with limited mobility using mobility transport.

There are a limited selection of paved/surfed routes within the park, however none of these routes penetrate into the quieter naturalistic areas of the site. Instead, they provide access to the park boundaries or around the perimeter of the site. The main paved route within the park is Ludwell Lane, a largely car free country lane which links Pynes Hill on the eastern boundary of the site to Wonford on the western boundary. There are a number of access points off Ludwell Lane which facilitate access into the large southern section of the DWT managed area of Ludwell Valley Park. The existing access routes within Ludwell Valley Park are presented in Figure 3.6.

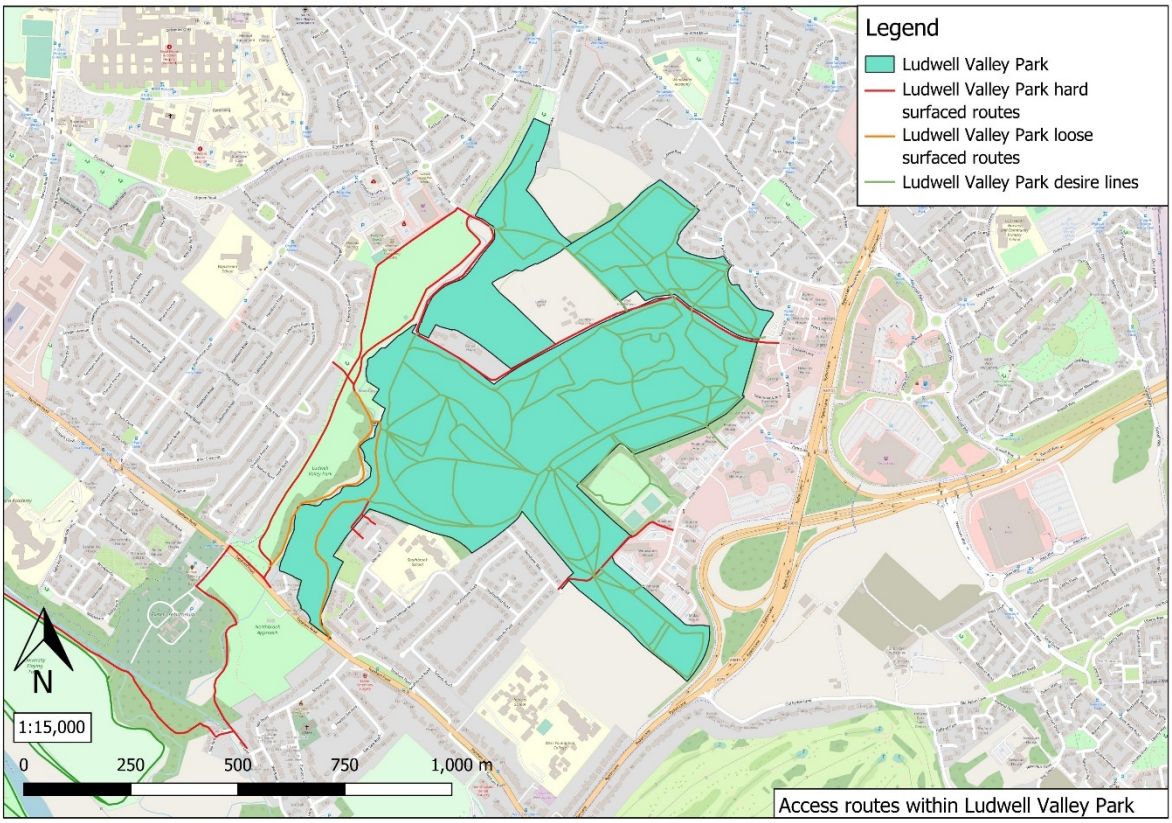

Figure 3.6 Map of access routes through Ludwell Valley Park (Data has been altered from the Riverside & Ludwell Masterplan where route categorisations were considered incorrect)

3.5 Proximity to Future Local Plan Allocations

Ludwell Valley Park is located within 0.5km of two future Local Plan allocations, and one recent planning permission, that will be delivered in the next 20 years. The closest significant site is Bridget Nurseries, Old Rydon Lane that will deliver 350 homes within the plan period. The other two allocations within a 0.5km radius of the site will deliver approximately 44 new residential homes between them, resulting in a total of around 400 new homes being built within 0.5km of Ludwell Valley Park in the next 20 years. The park is likely to be the closest large accessible green space for the majority of the new residents associated with these homes, and visitor numbers

on the site are likely to increase in the future upon the completion of the developments. A map detailing the location of the closest three proposed allocations is presented in Figure 3.7.

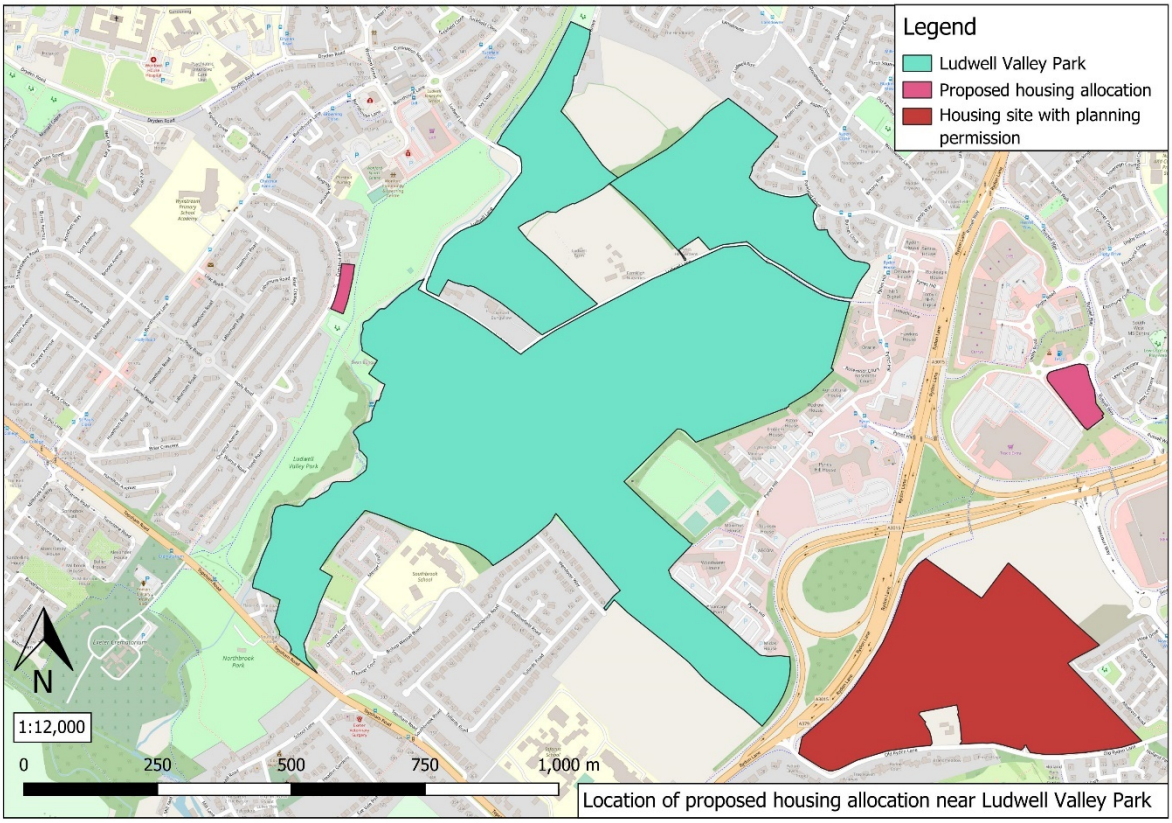

Figure 3.7 Allocations Map

3.6 Analysis Against SANG Criteria

The analysis of data in Sections 3.3 and 3.4 has allowed for Ludwell Valley Park to be assessed against the Guidelines for Creation of Suitable Alternative Natural Greenspace (SANG), (Natural England, 2021) to ascertain how many of the essential and desirable criteria the site already meets. The result of this assessment is presented in Table 3.8.

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
	1	Parking on-site	N – Limited to surrounding residential roads.
	2	Circular walk of 2.3-2.5km	Y
	3	Car parks easily and safely accessible by car and clearly sign posted	N

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
Essential Criteria	4	Access points appropriate for particular visitor use the SANG is intended to cater for	Y
	5	Safe access route on foot from nearest car park and/or footpath	Y
	6	Circular walk which starts and finishes at the car parks	N
	7	Perceived as safe– no tree and scrub cover along part of walking routes	Y
	8	Paths easily used and well maintained but mostly unsurfaced	Y – But paths can be challenging in wet conditions.
	9	Perceived as semi-natural with little intrusion of artificial structures	Y
	10	Range of habitats should be present	Y
	11	Access unrestricted – plenty of space for dogs to exercise freely and safely off the lead	Y – though owners are encouraged to keep dogs under control/on lead when moving through areas with livestock
	12	No unpleasant intrusions (e.g. sewage treatment smells etc.)	Y
Desirable Criteria	13	Clearly sign posted or advertised in some way	Y
	14	Leaflets/website advertising their location to potential users	Y – On DWT website
	15	Can dog owners take dogs from the car park to the SANG safely off the lead	N
	16	Gently undulating topography	Y – Mostly gently undulating but steep sections.
	17	Access points with signage outlining the layout of the SANG and routes available to visitors	Y – 5 interpretation boards within the site.
	18	Naturalistic space with areas of open countryside and dense and scattered trees and shrubs. Provision of open water is desirable	Y
	19	Focal point such as a viewpoint or monument within the SANG	Y – Benches with views over the city
	Total: 15/19		

Table 3.8 Ludwell Valley Park assessed against SANG criteria (Natural England, 2021)

3.6.1 Discussion

Ludwell Valley Park in its current state passes 9/12 of the essential criteria needed for a site to be considered suitable for SANG provision. It also passes 6/7 of the desirable criteria giving a total score of 15/19. This indicates that the site is already providing many of the functions traditionally associated with SANG sites This result highlights that there is scope for various enhancement measures within Ludwell Valley Park and these enhancements could improve the visitor experience within the site as well as draw in additional visitors. Data collected by Liley & Panter (2016) and DCC (2021/22) indicates that the park has capacity to absorb additional recreational pressure and deliver a similar experience to a European site.

3.7 Proposed Enhancements

Following the analysis of visitor numbers/data and the establishment of a baseline for Ludwell Valley Park, it is concluded that there is 25.81ha of SANG available within the Valley Park and current estimates suggest that the site could provide SANG mitigation for approximately 3,226 new residents. Consequently, a number of enhancements to increase capacity and draw additional visitors into the Valley Park have been recommended. The proposed enhancements are considered against the potential cost, deliverability, adherence to the SANG guidelines and the potential uplift. A summary of the proposed enhancements is presented in Table 3.21

3.7.1 Car Parking

As indicated during the establishment of the baseline of the Valley Park, there are currently no designated car parks for Ludwell Valley Park. Parking is currently limited to residential areas surrounding the park and a supermarket, and many of these areas have parking restrictions or require permits. There are two realistic options for delivering an official car park for the site in the future and these are outlined below.

3.7.1.1 Option 1(a)

Option 1(a) would require the delivery of a new off-site car park, with approximately 40-50 spaces in close proximity to the valley park.

Deliverability
An off-site car park would need to be on land that is neither owned nor managed by ECC/DWT, which reduces the deliverability of the option. It is likely that there would need to be extensive negations to acquire any suitable site. Therefore, the deliverability of the option is considered to be low at present.

Delivery Timeframe
The delivery timeframe for this option is therefore considered to be moderate-long, given that land acquisition is likely to be required prior to any construction of a car park taking place.

Costs
Estimated costs for land acquisition, car park creation and future maintenance are summarised in Tables 3.9 and 3.10

Creation Costs

Option	Costs	Total Cost
Land acquisition	£270,000.00	£270,00.00
Car park construction with associated infrastructure	£130,000.00	£130,000.00
	Total	**£400,000.00**

Table 3.9 Creation Costs

* Costs are estimates based on figures provided by DWT and further advised by ECC and take into account recent rises in inflation. Costs exclude VAT. Costs are based on a car park approximately 0.36ha in size with the cost of land being estimated at £300,000.00 per acre and are based on figures provided by DWT and ECC. Car park construction costs are based on the provision of 50 car parking spaces and assume that the land already comprises hard standing.

Maintenance Costs

Option	Cost/year	Total Cost (30 Years)
Car park maintenance	£792.00	£23,760.00
	Total	**£23,760.00**

Table 3.10 Annual Maintenance Costs

*Costs are estimates based on figures provided by DWT and advised by ECC and take future rises inflation into account. However, it is likely that annual maintenance costs will vary significantly over the management period, depending on inflation.

Wildlife Impacts
Given that a location has yet to be identified, it is not possible to determine the potential wildlife impacts at this stage.

Estimated Uplift
Data from visitor Interviews gathered by Liley (2015), indicated that 62% of visitors to Ludwell and Riverside Valley Park visited the parks for a duration of 30 minutes to an hour. It is reasonable to assume that the surveyed visitors who travelled to the Valley Parks by car visited for a longer duration. It could therefore be reasoned that a single space within a car park could be filled with 6 different vehicles over a 12-hour period (7am-7pm),

In 2021, the average car occupancy in the UK for all journey types was 1.6 people per vehicle (Department of Transport, 2022). Using this data, it is estimated that delivering the car park with 40-50 spaces could result in 384-480 additional users per day.

Adherence to SANG Guidelines
The delivery of a new car park for the Valley Park adheres to the Natural England SANG Guidelines (2021), which state that there must be parking on sites over 4ha in size (unless the site is intended for use within 400m only).

3.7.1.2 Option 1(b)

Option 1(b) would involve utilising the existing infrastructure at the proposed Northbrook Valley Park to provide a car park that serves both Northbrook and Ludwell Valley Park. The car park would be located on the south side of Topsham Road in close proximity to the southernmost entrance of Ludwell Valley Park. The existing infrastructure could provide a car park capable of delivering approximately 30 car parking spaces. A map identifying the location of the potential car park is presented in Figure 3.7.

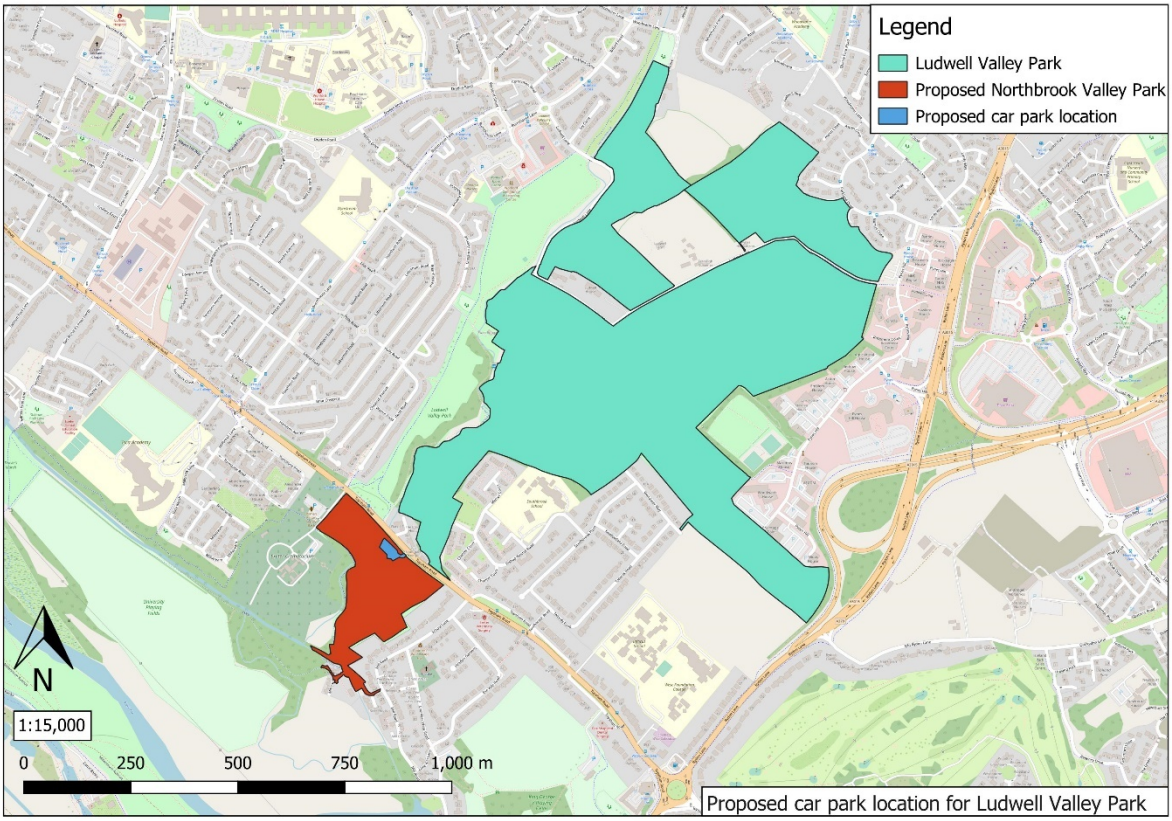

Figure 3.7 Map of potential car park location

Deliverability
The land proposed for the car park is currently owned by ECC and was previously used as the car park for a golf course. It is therefore considered that the deliverability of the option is high at present. There is also an existing entrance to the car park off Topsham Road, which reduces the need for significant additional infrastructure to make the car park accessible. However, the area will require parking bays to be marked out and a limited amount of resurfacing may be needed.

Delivery Timeframe
The delivery timeframe for Option 1(b) is likely to be considerably shorter than Option 1(a), as land acquisition is not required. Overall, the delivery timeframe of the option is considered to be short.

Costs
Delivery of Option 1(b) is likely to be significantly less expensive than Option 1(a). The majority of the creation costs are likely to relate to improvements to existing infrastructure. The estimated costs car park creation and future maintenance are summarised in Tables 6.11 and 6.12

Creation Costs

Option	Cost	Total Cost
Car park creation with associated infrastructure	£20,000.00	£20,000.00
	Total	**£20,000.00**

Table 3.11 Creation Costs

* Costs are estimates based on figures provided by DWT in 2022 and further advised by ECC and take into account recent rises in inflation. Costs exclude VAT. Car Park creation costs are based on the creation of 30 car parking spaces through lining, signage and targeted repairs.

Maintenance Costs

Option	Cost/year	Total Cost (30 Years)
Car park maintenance	£792.00	£23,760.00
	Total	**£23,760.00**

Table 3.12 Annual Maintenance Costs

*Costs are estimates based on figures provided by DWT in 2022 and take future rises inflation into account. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts
The area proposed for the car park currently comprises hard standing in reasonable condition. Vegetation is beginning to encroach into some hard standing areas, but this is currently limited. Overall, the creation of the car park will have very limited impact on protected species and habitats.

Estimated Uplift
Data from visitor Interviews gathered by Liley (2015), indicated that 62% of visitors to Ludwell and Riverside Valley Park visited the parks for a duration of 30 minutes to an hour. It is reasonable to assume that the surveyed visitors who travelled to the Valley Parks by car visited for a longer duration. It could therefore be reasoned that a single space within a car park could be filled with 6 different vehicles over a 12-hour period (7am-7pm),

In 2021, the average car occupancy in the UK for all journey types was 1.6 people per vehicle (Department of Transport, 2022). Using this data, it is estimated that delivering the car park with 30 spaces could result in 288 additional users per day.

Adherence to SANG Guidelines
The delivery of a new car park for the Valley Park adheres to the Natural England SANG Guidelines (2021), which state that there must be parking on sites over 4ha in size (unless the site is intended for use within 400m only).

3.7.2 Footpath Creation & Improvements – Option 2

As indicated during the establishment of the baseline of the Valley Park, there are currently a plethora of footpaths/desire lines through the park. The nature of desire lines means they can be muddy during periods of wet weather, and this is especially true in Ludwell Valley Park as parts of the site are very steep. This is particularly challenging for people with mobility issues, pushchair users and mobility transport users. It is proposed to improve the condition a number of existing desire lines across the site and enhance them into official footpaths. This will provide routes suitable for people with a range of mobility needs. Improving existing desire lines into official footpaths could also distribute visitors more evenly across the park, allowing the site to absorb additional recreational pressure. Any improvements to footpaths would be undertaken with the aim of creating unsurfaced, safe routes to avoid the site becoming too urban in feel. A summary of the potential routes proposed for enhancement is presented in Figure 3.8.

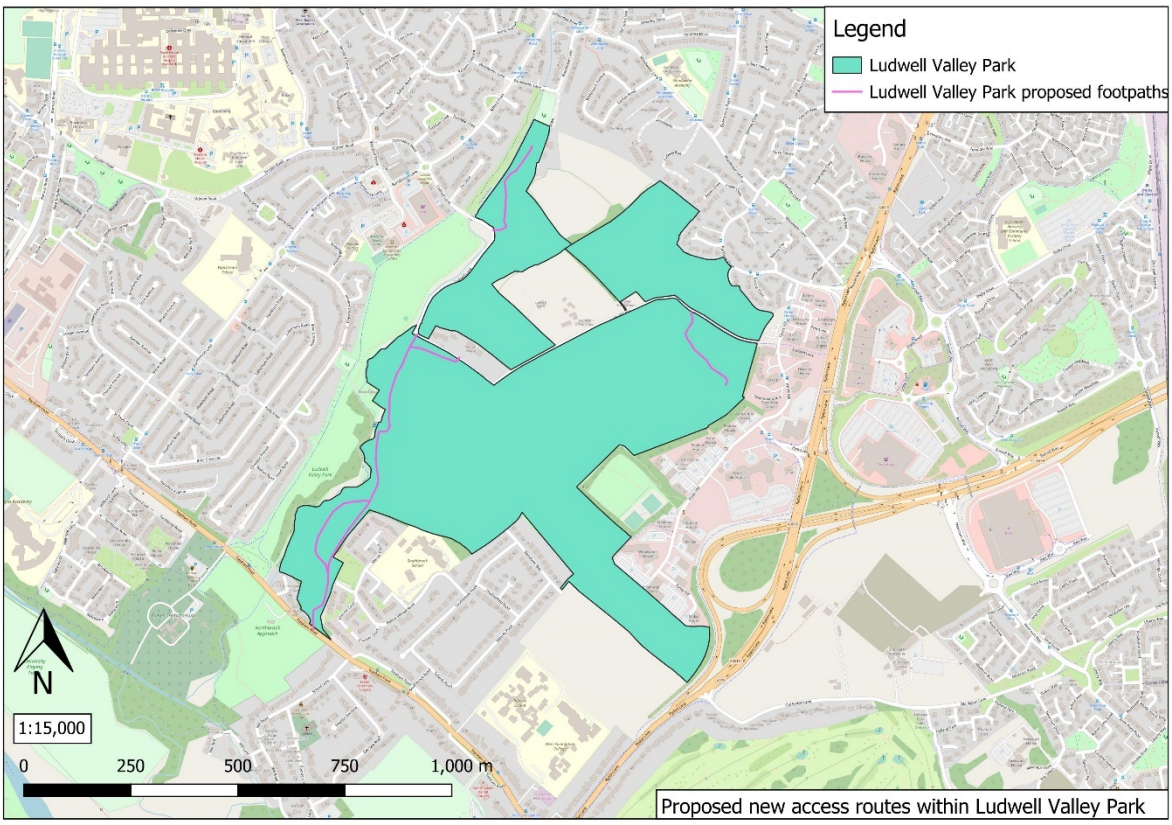

Figure 3.8 Summary of potential footpath routes

Deliverability
Given that the site is owned by ECC and managed by DWT, it is unlikely there will be any significant challenges in delivering the new footpaths following their approval. It is therefore considered that the deliverability of the footpaths is high at present.

Delivery Timeframe
It is likely that the delivery timeframe for new footpaths would be relatively short following the acquisition of funds to facilitate creation.

Costs
The estimated costs of footpath creation and future maintenance are summarised in Tables 3.13 and 3.14.

Creation Costs

Option	Cost/metre	Total Cost
1,606m of Footpath Improvements	£100.00/metre	£160,600.00
	Total	**£160,600.00**

Table 3.13 Creation Costs

*Costs are estimates based on figures provided by DWT and advised by ECC and take into account recent rises in inflation. Costs exclude VAT.

Maintenance Costs

Option	Average Cost/year	Total Cost (30 Years)
Footpath Maintenance	£573.03	£17,191.00
	Total	**£17,191.00**

Table 3.14 Annual Maintenance Costs

* Costs are estimates based on figures provided by DWT and advised by ECC and take future rises inflation into account. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts

The areas proposed for the new footpaths currently comprise a mixture of broadleaved plantation/semi-natural woodland and semi-improved neutral grassland. Given that much of the footpath creation focuses on enhancing existing desire lines into official footpaths, impacts on habitats are considered to be limited. However, improving the condition of footpaths is likely to encourage more users into previously quieter areas and this could lead to an increase in disturbance to wildlife in these areas. This could be particularly pronounced in woodland areas and adjacent to hedgerows, where there are nesting birds present.

Estimated Uplift

It is estimated that the proposed creation/improvements will result in additional visits to the Valley Park from a variety of user groups, including those with limited mobility.

Adherence to SANG Guidelines

The delivery of new/improved footpaths for the Valley Park adheres to criteria 2, 7 and 8 in the Natural England SANG Guidelines (2021). These criteria include providing circular walking routes between 2.3-2.5km in length and ensuring that all paths are safe, well maintained and mostly unsurfaced.

3.7.3 Improved Cycling Provision – Option 3

As indicated during the establishment of the baseline of the Valley Park, cycling provision within the park is limited. Whilst the site park is bisected by a cycle path on Ludwell Lane, there are no designated cycle paths through fields or areas of countryside and the only official bike racks are located at Wonford Field. Improvements to cycling provision should focus on providing additional bike racks (Sheffield Stands) in secure well-lit areas of the park so that users can travel to the site by bike and store their bike whilst exploring the park. It is recommended to install approximately 30 bicycle racks across two locations. A summary of proposed bike rack locations is presented in Figure 3.9.

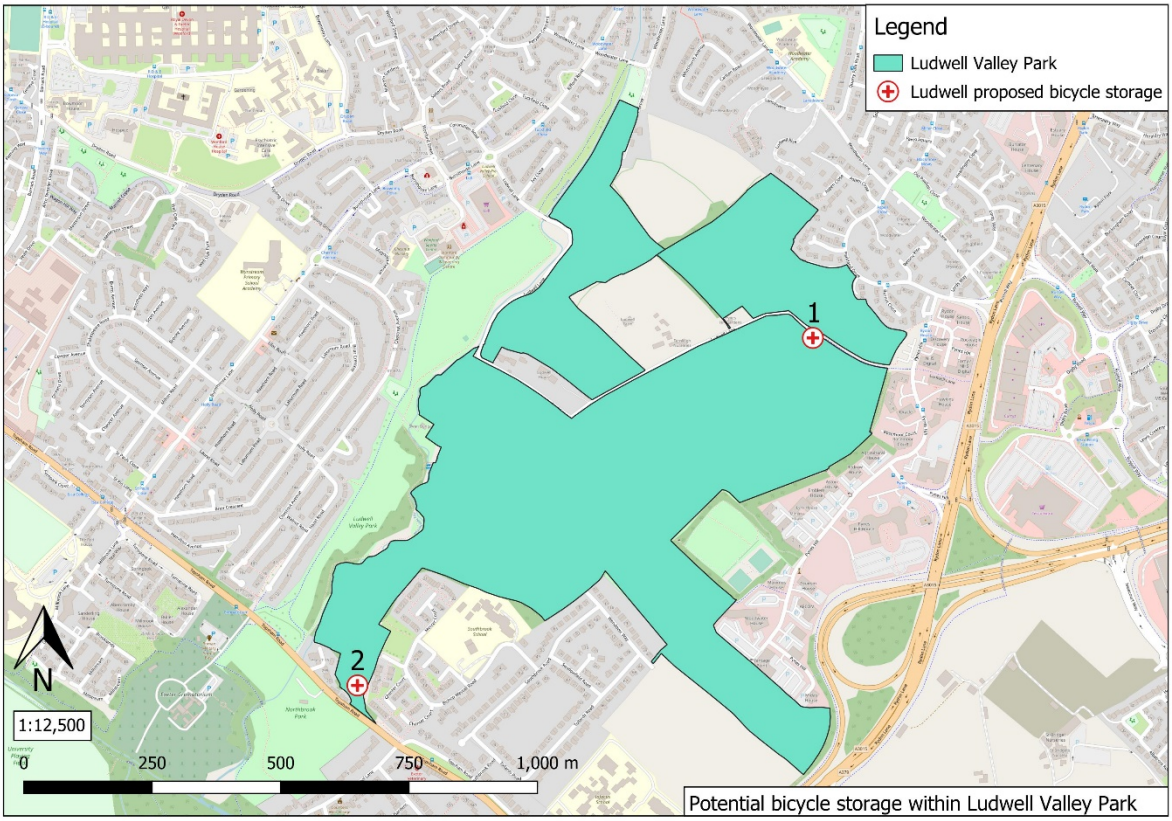

Figure 3.9 Map of bicycle storage locations

Deliverability
Locations 1 and 2 highlighted in Figure 3.9 are located within DWT managed land. Therefore, there are unlikely to be any significant challenges in delivering the bike racks and the deliverability of the option is considered to be high.

Delivery Timeframe
It is likely that the delivery timeframe for bicycle racks would be relatively short following the acquisition of funds to facilitate their installation. It is therefore likely that the timeframe for delivery would be short.

Costs
The estimated costs for bicycle storage units/lockers and future maintenance are summarised in Tables 3.15 and 3.16.

Creation Costs

Option	Cost/unit	Total Cost
30 x Bike Racks (Sheffield Stands)	£250.00/unit*	£7,500.00
	Total	**£7,500.00**

Table 3.15 Creation Costs

* Costs are estimates based on figures provided by DWT and ECC and take into account recent rises in inflation. Costs exclude VAT.

Maintenance Costs

Option	Average cost/year	Total Cost (30 Years)
Bike Rack Maintenance	£1,903.00	£57,090.00
	Total	**£57,090.00**

Table 3.16 Annual Maintenance Costs

* Costs are estimates based on figures as advised by ECC based on £200 to repaint one bike rack every 5 years, and take future rises inflation. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation. It is assumed that each bike rack would be repainted once every 5 years.

Wildlife Impacts

There are unlikely to be any disenable impacts to wildlife at Location 1, as the location comprises hard standing; installing bicycle storage will not affect protected species or habitats. Location 2 currently comprises grassland and scattered trees. Installation of bicycle storage units would result in a loss of grassland habitats.

Estimated Uplift

It is anticipated that the proposed bicycle storage units would result in additional visits to the Valley Park. If a single bike rack could be utilised by 6 different bikes over a 12-hour period (7am-7pm) then it is estimated that delivering 30 bike racks could result in 180 additional users per day.

Adherence to SANG Guidelines

The provision of bicycle storage units does not address any essential or desirable criteria within the Natural England SANG Guidelines (2021). However, improving cycling provision around the Valley Park accords with the objective of getting people to use the Park and hence drawing visitors away from the European sites and is in accordance with the principles of Liveable Exeter and the Exeter Transport Strategy which aims to invest in infrastructure to ensure that walking and cycling are the favoured choice of transportation in the future (Exeter City Council, 2019).

3.7.4 Provision of Wild Play Facilities – Option 4

One of the ways in which the site could be improved for children and families involves the provision of wild play facilities. The benefits of wild play facilities are extensive. It has the potential to support both the physical and mental health of children, whilst also aiding child development and assisting with the expansion of social skills (New Forest National Park Authority, 2021). It is recommended that a wild play area is established within a suitable area of the Valley Park. This should comprise an area where grazing absent. The provision of wild play facilities could encourage more parents with young children to visit the site on a regular basis. The recommended location for the wild play area is presented in Figure 3.10.

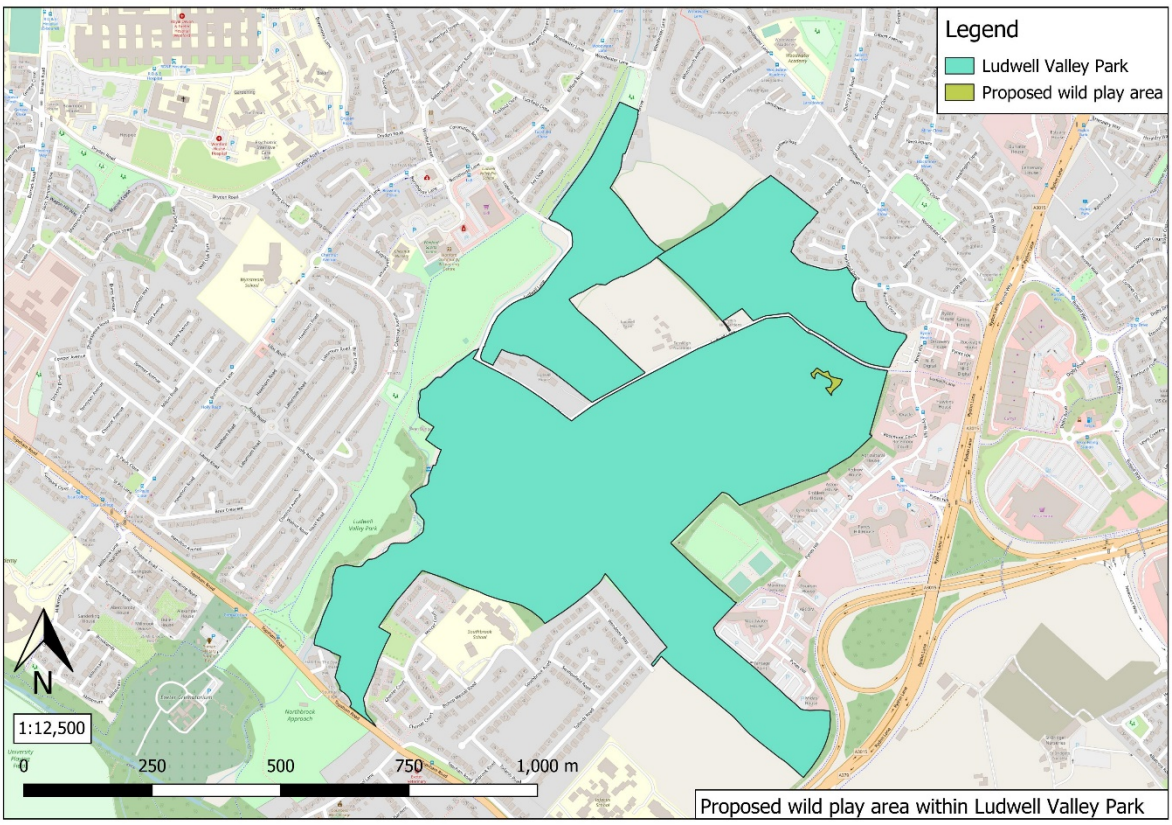

Figure 3.10 Map of proposed wild play area location

Deliverability
Given that the site is owned by ECC and managed by DWT, it is unlikely there will be any significant challenges in delivering a wild play area within the site. It is therefore considered the deliverability of the option is high.

Delivery Timeframe
It is likely that the delivery timeframe for the provision of a wild play facility would be short, following the acquisition of funds to facilitate creation and installation.

Costs
The estimated costs of creation and installation of a wild play facility and future maintenance are summarised in Tables 3.17 and 3.18. This cost is based on the installation of natural play elements comprising logs, stumps and willow tunnels, and a feature such as balance posts with rope.

Creation Costs

Option	Materials cost	Total Cost
Wild Play Facility	£8,000.00	£8,000.00
	Total	**£8,000.00**

Table 3.17 Creation Costs

* Costs are estimates based on figures provided by DWT Discover Nature team and take into account recent rises in inflation. Costs exclude VAT.

Maintenance Costs

Option	Cost/year	Total Cost (30 Years)
Maintenance	£697.76	£20,933.00
	Total	**£20,933.00**

Table 3.18 Annual Maintenance Costs

* Costs are estimates based on figures provided by DWT Discover Nature team and take future rises inflation costs into account. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts

The area with potential to provide a wild play facility comprise semi-improved neutral grassland and development of this area could result in some loss of habitat. Impacts on protected species are likely to be limited.

Estimated Uplift

The provision of a wild play area could encourage parents with children to visit the site more frequently, particularly those living in nearby residential areas.

Adherence to SANG Guidelines

The creation of wild play facilities does not address any essential or desirable criteria within the SANG checklist and no reference is made to it within the wider Natural England SANG Guidelines (2021). However, the benefits of wild play are well documented, and the option has the potential to draw additional visitors into the site and hence away from the European sites.

	Creation Cost	**Maintenance Costs (30 Years)**	**Uplift Provided** (Y/N)	**Delivery Timeframe** (Long, Moderate, Short)	**Deliverability** (Low, Moderate, High)	**Adherence to SANG Guidelines** (Y/N)	**Implemented** (Y/N)
Option 1 – Off-site car park on adjacent land	£400,000.00	£23,760.00	Y	Moderate – Long	Low	Y – Addresses Criteria 1 on SANG Checklist	N
Option 1(a) – Provide car park at Northbrook	£20,000.00	£23,760.00	Y	Short	High	Y – Addresses Criteria 1 on SANG Checklist	Y
Option 2 – Footpath creation and improvements	£160,000.00	£17,191.00	Y	Short	High	Y – Addresses criteria 2, 7 and 8 in SANG Checklist	Y
Option 3 – Improved cycling provision	£7,500.00	£57,090.00	Y	Short	High	N – Does not address SANG criteria	Y
Option 4 – Wild Play provision	£8,000.00	£20,933.00	Y	Short	High	N – Does not address SANG criteria	Y
Total estimated cost of all measures proposed for implementation including annual maintenance: £468,502.00							

Table 3.19 Summary of all options for Ludwell Valley Park with predicted cost, delivery timeframe, deliverability, estimated uplift and adherence to SANG guidelines.

3.8 Discussion

The proposed enhancements outlined in Section 3.7 have the potential to improve the visitor experience, increase visitor numbers and improve access for a variety of users in Ludwell Valley Park. These enhancements have been assessed against several criteria including cost, delivery timeframe, deliverability and adherence to SANG guidance. This has enabled comparisons between measures to ascertain which enhancements should be implemented and are likely to deliver the greatest benefits and reduce pressure on European sites. It is considered that options 1a – 4 are the most suitable options for implementation in the future. Some of these measures do not adhere to the current SANG guidelines. However, as stated in Appendix 1, an approach has been taken to fully consider all enhancements that can provide uplift. A summary of the enhancements suitable for implementation is presented in Table 3.22.

	Implementation (Y/N)	**Justification**
Option 1(a) – Off-site car park on adjacent land	N	The option is significantly more expensive than option 1a and has a low likelihood of delivery.
Option 1(b) – Provide car park at Northbrook	Y	The option is the most cost-effective way to provide car parking for Ludwell Valley Park and the deliverability of the option is considered high.
Option 2 – Footpath creation and improvements	Y	Improvements to footpaths will encourage a wider range of people to visit the site and has the potential to distribute visitors more evenly throughout the site.
Option 3 – Improved cycling provision	Y	Providing bicycle storage is unlikely to result in a significant increase in visitor numbers. However, the measure is in keeping with Liveable Exeter's vision of promoting cycling as a main method of transport in the city in the future.
Option 4 – Wild Play provision	Y	Wild play provision has the potential to encourage more family visits to the park, is a relatively inexpensive option and the deliverability is considered high.

Table 3.20 Summary table with justification for implementation of selected options

3.9 Conclusion

The assessment of the baseline of Ludwell Valley Park has indicated that the park has approximately 25.81ha available for SANG and has capacity to provide SANG mitigation for an approximately 3,226 new residents. It is considered that the combination of options summarised in Table 3.22 will provide uplift and increase the capacity of the site sufficiently to accommodate additional visitors.

4 Mincinglake Valley Park

Scattered Trees and Grassland in Mincinglake Valley Park (DWT)

Mincinglake Valley Park

4.1 Introduction

Mincinglake Valley Park is a large Valley Park in Exeter. The site is a former waste tip and has since been transformed into a large area of accessible naturalistic greenspace. The designation, protecting the park from future development, encompasses an area approximately 34.68ha in size. However, the geographic scope of this work is focused on the areas of park that are managed by DWT, which represent an area approximately 19.40ha in size. The boundary of the study area is outlined in Figure 4.1.

The park is located at the northern edge of Exeter and is bounded by open countryside to the north and residential development to the east, south and west. The park has an open and naturalistic feel with a variety of habitats present including broadleaved woodland, tussocky wildflower rich grassland and scattered scrub. The Northbrook watercourse also has its headwaters within the Valley Park. The site represents a large area of semi-natural habitat within a relatively urban setting and the park is therefore strategically important for wildlife, providing refuge and foraging habitat for many species of birds and bats. The location of the park close to residential areas also means that the park is an important area of accessible GI for local residents and the park is utilised by dog walkers, ramblers and people seeking quiet recreation, including families.

The topography of the park is mixed, with relatively flat, easily accessible terrain in the southern extent and steep sided slopes in more northern areas of the site, though this is outside of the area managed by DWT. The steep areas provide excellent views across the city and down to the Exe estuary beyond and the Exeter Green Circle walking route also passes through the southern extent of the park.

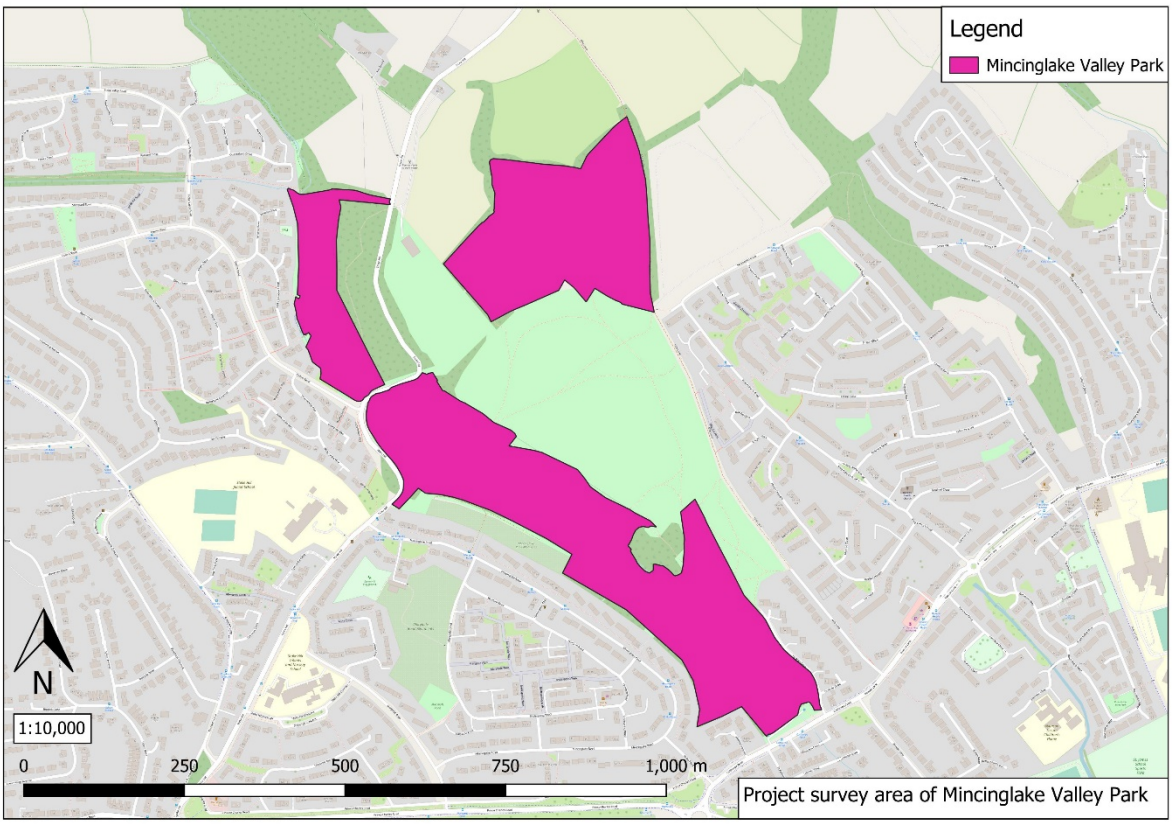

Figure 4.1 Map of study area

4.2 Analysis of Visitor Numbers & Origins of Access

There is limited data regarding the visitor numbers within Mincinglake Valley Park. The data that is available is some years old and spatially limited. However, the data does provide an insight into visitor numbers within the park.

4.2.1 ECC survey data (2014)

As part of a visitor counting survey in the park in 2014, a total of six visitor counters were installed at various locations within the Valley Park. These collected data on visitor numbers between February and March of 2014 and sensors were recoding 24 hours a day for the duration of the survey period. Two of the counters were infra-red counters and the remaining four were pad operated counters, which measure footfall on specifically positioned underground pads (Moulton, 2014). The sensors recorded all users passing them including walkers, cyclists and horse-riders. Three of the 6 sensors were positioned on significant access points into the Valley Park (sensors 1,2 and 6). The other sensors were located within the park itself and were placed in popular walking routes. Sensor 5 failed during the survey and did not collect any data. The locations of the sensors are presented in Figure 4.2

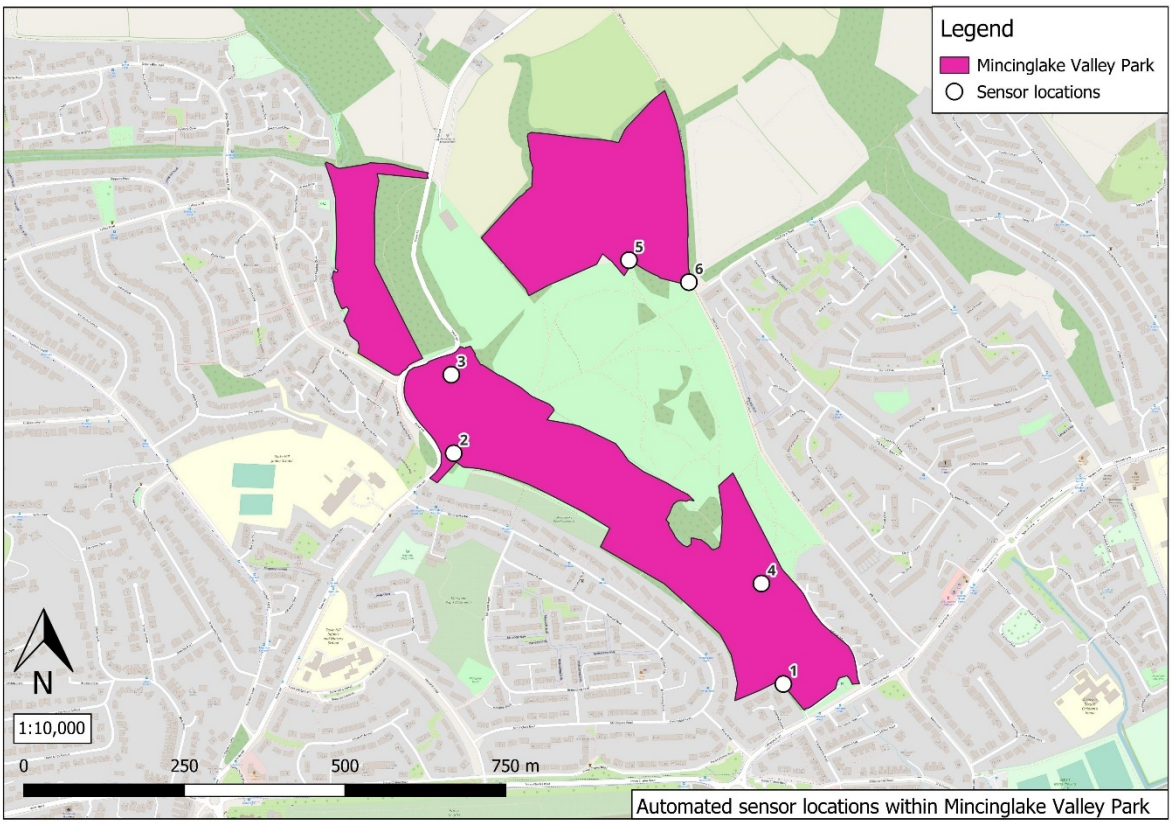

Figure 4.2 Sensor Locations

Limitations associated with the survey include that some users may have been recorded multiple times, particularly if they are walking a circular walk within the park. Additionally, the sensors do not cover all the available access points into the park and some users may not have been recorded. Assuming the data is relatively representative, the results suggest the site had an average of 0.23 people passing the sensor points per ha per hour. This is below the 1 person per ha per hour guide for SANG sites as outlined by Liley & Panter (2016). A summary of the number of people passing counter points within Mincinglake Valley Park in 2014 is presented in Table 4.1

Date (Number of survey points)	Size of DWT managed area of VP	Average number of people passing counter points per day	Averaged people passing counter points per day per ha	Average people passing counter points per ha per hour
2014 (6)	19.40	110	5.67	0.23

Table 4.1. Average number of people passing counter points within Mincinglake Valley Park per day with estimations of the average number of people passing counter points per ha per hour (Data provided by Moulton, 2014)

This data suggests that there is still additional recreational capacity within Mincinglake Valley Park. The potential areas available for SANG, calculated on the 1 person per ha per hour benchmark is presented in Table 4.2

Date (Number of survey points)	Size of DWT managed area of VP (ha)	Averaged people passing counter points per ha per hour	Hectares available for SANG use
2014 (6)	19.40	0.23	14.93

Table 4.2. Average number of people entering Mincinglake Valley Park per day with estimations of the average number of people passing counter points per ha per hour (Data provided by Moulton, 2014)

The figures in Table 4.2 represent an estimation of the amount of SANG that might be available within Mincinglake Valley Park during the time of the survey. Calculations made by DWC using this data indicate that there was approximately 14.93ha available for SANG within the DWT managed area of Mincinglake Valley Park in 2014. The Natural England guidance specifies that 8ha of SANG should be provided per 1,000 residents for new SANG sites. If this principle is applied to Mincinglake Valley Park, the site could provide SANG mitigation for approximately 1,866 new residents in Exeter.

However, there is uncertainty relating to whether the data regarding visitor numbers are under or overestimates. Furthermore, the data used to estimate this are now over 9 years old and it is likely that the amount of SANG available within the site has decreased since the survey was carried out, due to a population increase within the city during that time. More recent data gathered as part of the Exeter Green Circle Monitoring Surveys in 2021/22 has therefore also been analysed to estimate whether the park still has capacity for SANG provision.

4.2.2 Devon County Council survey data (2021/22)

More recent data gathered as part of the Exeter Green Circle Monitoring Surveys in 2021/22 has also been analysed to ascertain whether Mincinglake Valley Park still has capacity for SANG provision.

Data was collected through the use of a video camera at one location, located off Calthorpe Road, which is one of the main access points into the Valley Park at its southern extent. The video camera recorded users both leaving and entering the site. One access point into the park was subject to assessment on a Friday, Saturday and Sunday in both 2021 and. The location of the survey camera is presented in Figure 4.3.

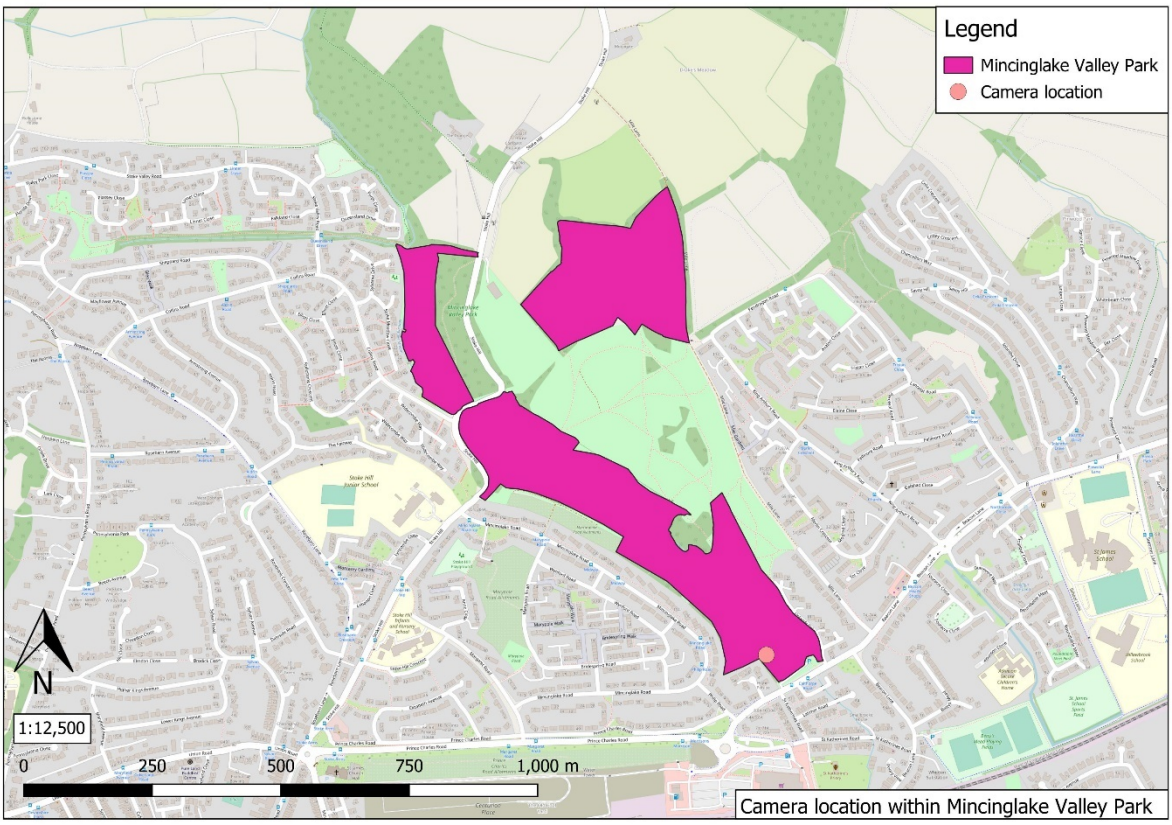

Figure 4.3 Camera Location

Results from the Green Circle Monitoring Survey indicated that site is less busy than both Riverside and Ludwell Valley Park with an average of 91 people entering the site each day in 2021 and an average of 90 people entering the site in 2022. A summary of the number of people entering Mincinglake Valley Park through the entrance off Calthorpe Road in 2021/22 is presented in Table 4.3. Analysis of daily values indicated that usage of the site throughout the survey period was relatively even, with the busiest day in 2021 occurring on a Friday and the busiest day in 2022 occurring on a Sunday.

Date (Number of survey points)	Size of DWT managed area of VP	Average number of people entering site per day	Averaged people per day per ha entering site	Average people per ha per hour entering site
2021 (1)	19.40	91	4.70	0.31
2022 (1)	19.40	90	4.65	0.31

Table 4.3 Average number of people entering Mincinglake Valley Park per day with estimations of the average number of people entering per ha per hour (Data provided by DCC)

Capacity estimates indicate that an average of 0.31 people per ha per hour entered Mincinglake Valley Park through the southern entrance during the survey period in

2021/22. This is below the 1 person per ha per hour guide for SANG sites as outlined by Liley & Panter (2016). The results from these calculations indicate there is still additional recreational capacity within Mincinglake Valley Park. The potential areas available for SANG, calculated based on the 1 person per ha per hour benchmark is presented in Table 4.4

Date (Number of survey points)	Size of DWT managed area of VP	Averaged people per ha per hour entering site	Hectares available for SANG use
2021 (1)	19.40	0.31	13.38
2022 (1)	19.40	0.31	13.38
Average of both years	19.40	0.31	13.38

Table 4.4 Average number of people entering Mincinglake Valley Park per day with estimations of the average number of people entering per ha per hour (Data provided by DCC)

The figures in Table 4.4 represent the maximum possible SANG capacity that might be available in Mincinglake Valley Park. Calculations using the data provided by DCC, (2021/22) indicates that there was approximately 13.38ha available for SANG within the DWT managed area of Mincinglake Valley Park in 2022. This is a decrease of 1.5ha from 2014. The Natural England guidance specifies that 8ha of SANG should be provided per 1,000 residents for new SANG sites. If this principle is applied to Mincinglake Valley Park, the site could provide SANG mitigation for approximately 1,672 new residents in Exeter.

The 2014 survey assessed a total of 6 survey locations within the Valley Park. By contrast the survey carried out by DCC in 2021/22 only assessed one location. However, the one survey point in the DCC Survey located off Calthorpe Road is located in the same position as Sensor 1 in the survey carried out in 2014. These data points can therefore be compared directly against each other. The result of this comparison is summarised in Table 4.5

Survey (Date)	Average number of people entering & leaving site per day through access point off Calthorpe Road
Moulton, (2014)	177/day
DCC, (2021/22)	184/day

Table 4.5 Average number of people entering and leaving Mincinglake Valley Park throughout the survey periods (Data provided by Moulton, 2014 & DCC, 2021/22)

Comparison of the two datasets from the survey location off Calthorpe Road indicates that the values are broadly similar, but with a marginal increase in the average number of people entering and leaving the site from 2014 to 2022. This marginal increase in visitors also mirrors the small reduction in the hectarage

available for SANG within the park from 2014 to 2022. These two trends mirror each other and suggest a slight decrease in the ability of the site to absorb recreational pressure.

The data therefore only represents a small percentage of the available access points into the Valley Park. However, it is considered that the value of 13.38ha is the best available figure for representing how many hectares may be available for SANG use within Mincinglake Valley Park.

4.2.3 Visitor Origins/Access Routes

Mincinglake Valley Park has a number of access points. Examination of maps provided by Devon Wildlife Trust and satellite imagery highlights a total of 11 possible access points into the park with at least five substantial, 'official' access points and 6 other smaller unofficial access points around the perimeter of the site. Many of these identified access points have never been surveyed to ascertain the number of people utilising them. The 2014 survey work installed counters on a total of four access points and these form the basis of the results discussed in this section.

Results from the sensors counts are summarised in Table 4.6 and show that Counter 3, located at the access point off Stoke Hill in the northern extent of the site, recorded the highest number of people accessing the site with an average of 231 users passing the counter each day. Counter 1 associated with the access points off Calthorpe Road recorded the second highest number of users utilising the access point, with an average of 177 people passing the counter per day.

Area	Counter	Average number of passes recorded per day
Mincinglake Valley Park	1	177
	2	52
	3	231
	4	55
	5	Failed – No data
	6	38

Table 4.6. Average number of passes at each counter location (data from Moulton, 2014)

Additional data gathered by DCC in 2021/22 indicated that the access point off Calthorpe Road associated with Counter 1 continues to be a well-used access point into the site. An average of 184 users were recorded utilising the access point during the survey which represents a 3.9% increase from 2014. No other access points were assessed during the 2021/22 survey and the current use of the other available access points is unknown.

4.3 Type of Usage

4.3.1 Dog Walking

Dog walking is likely to account for a substantial number of visits to Mincinglake Valley Park. Dog walking is permitted in all areas of the Valley Park and is unrestricted. The park is not grazed by livestock and there are therefore minimal conflicts between dogs and livestock. The site is frequently utilised by dog walkers, and this is likely to increase in the future as the local population continues to rise.

4.3.2 Informal Sport/Recreation

There are no informal sport/recreation areas within the DWT managed area of Mincinglake Way Valley Park.

4.3.3 Nature Rich Areas

There are a good variety of habitats within the DWT managed area of Mincinglake Valley Park. The site comprises a mixture of broadleaved woodland, grassland areas, scattered scrub, orchards and the Northbrook watercourse also has its headwaters within the park. The watercourse is polluted by heavy metals from the underlying waste material deposited when the site was an active waste tip. The northern grassland field managed by DWT is particularly species rich, but diversity has declined in recent years. Whilst the park is not covered by a statutory or non-statutory designation, the site is of significant strategic importance to local wildlife as the park represents a large semi-natural habitat within an urban setting, providing foraging, refuge and hibernation habitat to a variety of species including insects and birds.

4.3.4 Other Uses

The site is utilised by ramblers and cyclists and many others utilise the park for quiet recreation. The views over Exeter are also likely to provide an attraction for visitors. There is also a community building on the northeastern edge of the site which attracts visitors to the Valley Park more generally.

4.4 Infrastructure

4.4.1 Car Parking

There are currently two designated car parks for Mincinglake Valley Park. These car parks provide a total of between 20-25 parking spaces.

One of these car parks is located off Stoke Hill on the northern extent of the site and provides space for approximately 12-15 vehicles. The surface of the car park is smooth and consists of hardstanding in good condition.

The other car park is located off Calthorpe Road on the southern extent of the site and similarly consists of hardstanding in good condition. The car park provides space for approximately 8-10 vehicles.

There is additional unofficial car parking in some of the permit free residential areas surrounding the site, but access into the site from these locations can be challenging and the availability of spaces is highly variable. The car park locations are summarised in Figure 4.4

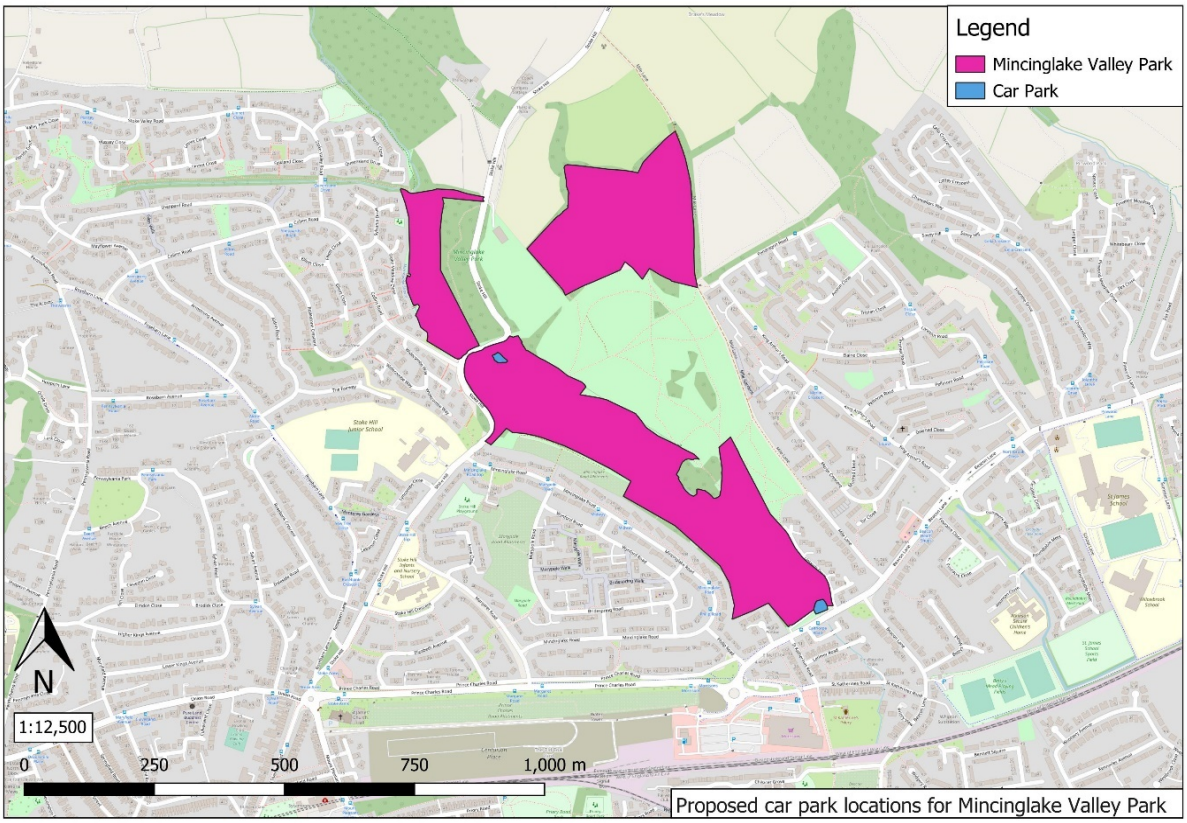

Figure 4.4 Car Park Locations

4.4.2 Toilet Facilities

There are currently no public access toilet facilities within Mincinglake Valley Park.

4.4.3 Cafés & Food Establishments

There are currently no cafés or food establishments within Mincinglake Valley Park. The closest large establishment providing food is Morrisons supermarket, located approximately 0.23km south-west of the site.

4.4.4 Access

There are a variety of Public Rights of Way, unsurfaced footpaths and desire lines through Mincinglake Valley Park.

Many of the official footpaths through the site run on a south-east to north-west orientation and are largely surfaced, though there is variability in the type of surface with stone and concrete sections. The condition of these paths is highly variable, and they can be muddy and difficult to negotiate in periods of wet weather. This is

particularly challenging for people with mobility issues and pushchair and mobility scooter users. However, during periods of dry weather, the paths are likely to be suitable for an array of users including cyclists, walkers and mobility scooter and pushchair users. Whilst the condition of the paths is variable, vegetation encroachment is limited, and the paths are easily discernible through the landscape.

In addition to the official access routes, there are a number of desire lines crossing the park. In most instances, these desire lines deviate from the official access routes to access the higher elevations of the park. Desire lines ascend up the steeper sections of the site to access the viewpoints across the city. The very nature of desire lines means the paths are uneven with some vegetation encroachment making them unsuitable for cyclists and people with mobility issues. In some areas the desire lines themselves are vegetated and can quickly become eroded to bare earth/mud in periods of excessively dry/wet weather. As a result, many of the desire lines through the site are best suited to walkers and are unsuitable for users with limited mobility. A map identifying the access routes through the site including surfaced/unsurfaced routes and desire lines is presented in Figure 4.5.

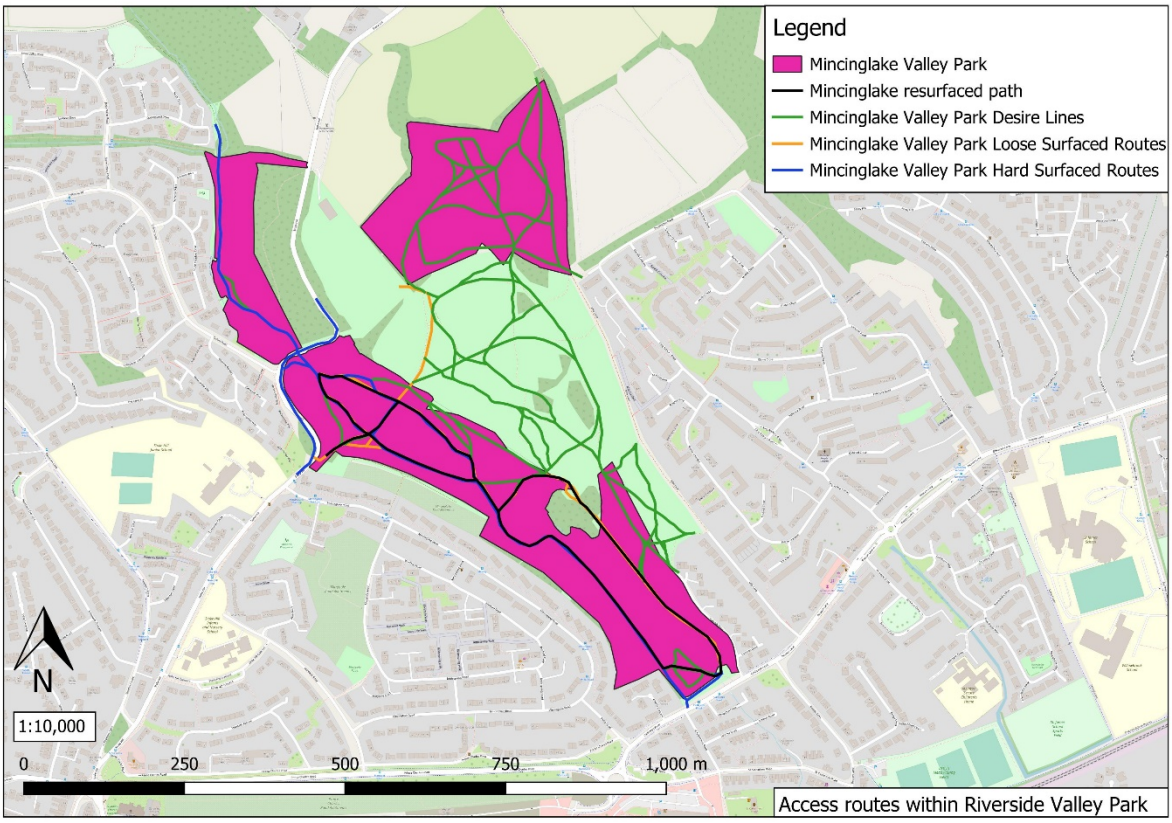

Figure 4.5 Access routes within Mincinglake Valley Park

4.5 Proximity to Future Local Plan Allocations

Mincinglake Valley Park is not directly adjacent to any future allocations in the emerging Exeter Plan. The location of the park on the northern outskirts of the city means it is relatively removed from much of the future development planned in the

city. It is therefore possible that Mincinglake will not experience as big of an increase in usage as some of the other valley parks that are directly adjacent to future Local Plan allocations. Any enhancements to the site should therefore focus on encouraging existing residents to visit from a wider reach.

The closest significant allocation within the emerging Exeter Plan is East Gate, which is located approximately 1.5km south-west of the park. The allocation could deliver approximately 850 homes over the next 20 years. Whilst the allocation is relatively removed from the park, this allocation combined with the others planned for the city over the next 20 years will likely result in more usage of the valley park in future. A map detailing the location of nearby allocations is presented in Figure 4.6.

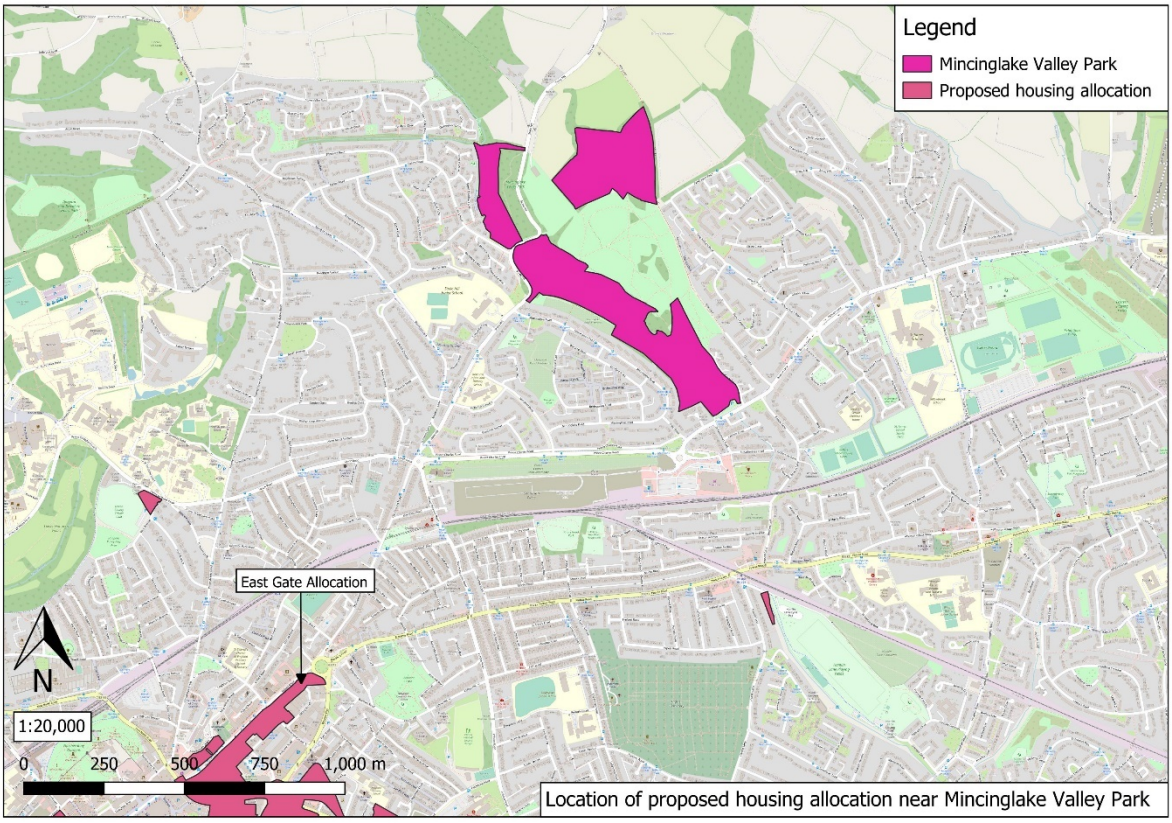

Figure 4.6 Location of nearby housing allocations

4.6 Analysis Against SANG Criteria

The analysis of data in Sections 4.3 and 4.4 has allowed for Mincinglake Valley Park south to be assessed against the Guidelines for Creation of Suitable Alternative Natural Greenspace (SANG), (Natural England, 2021) to ascertain how many of the essential and desirable criteria the site already meets. The result of this assessment is presented in Table 4.7.

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
Essential Criteria	1	Parking on-site	Y
	2	Circular walk of 2.3-2.5km	Y
	3	Car parks easily and safely accessible by car and clearly sign posted	Y - Car parks accessible by car, but not clearly signposted from Stoke Hill.
	4	Access points appropriate for particular visitor use the SANG is intended to cater	Y
	5	Safe access route on foot from nearest car park and/or footpath	Y
	6	Circular walk which starts and finishes at the car parks	Y
	7	Perceived as safe– no tree and scrub cover along part of walking routes	Y
	8	Paths easily used and well maintained but mostly unsurfaced	N – Main paths are surfaced and condition of paths is variable.
	9	Perceived as semi-natural with little intrusion of artificial structures	Y
	10	Range of habitats should be present	Y
	11	Access unrestricted – plenty of space for dogs to exercise freely and safely off the lead	Y – Dog access unrestricted and no conflict with livestock.
	12	No unpleasant intrusions (e.g. sewage treatment smells etc.)	Y
Desirable Criteria	13	Clearly sign posted or advertised in some way	Y – Clearly sign posted within the site and two large notice boards at north and south end of the park.
	14	Leaflets/website advertising their location to potential users	Y – Website.
	15	Can dog owners take dogs from the car park to the SANG safely off the	Y
	16	Gently undulating topography	Y – largely gentle topography with some steep sections.
	17	Access points with signage outlining the layout of the SANG and routes available to visitors	Y – 2 Interpretation Boards, one at each car park.

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
	18	Naturalistic space with areas of open countryside and dense and scattered trees and shrubs. Provision of open water is desirable	Y
	19	Focal point such as a viewpoint or monument within the SANG	Y – Viewpoints over the city
	Total: 18/19		

Table 4.7 Mincinglake Valley Park assessed against SANG criteria (Natural England, 2021)

4.6.1 Discussion

Mincinglake Valley Park currently passes 11/12 of the essential criteria needed for a site to be considered suitable for SANG provision. It also passes 7/7 of the desirable criteria giving a total score of 18/19. This indicates the park is highly suitable for SANG provision and the results from the capacity estimates indicate that there is scope for Mincinglake Valley Park to absorb additional recreational pressure. The most recent data indicates that the park could provide 13.38ha of SANG provision, delivering SANG mitigation for approximately 1,672 new residents. However, there is some uncertainty within these figures, due to the limitations of the datasets underpinning them. The park is also over 1.5km away from the nearest significant future Local Plan allocation. As a result, it is possible that the park will play less of a role in diverting new residents in the city away from the European sites than some of the other valley parks directly adjacent to large allocations. Any enhancements to the site should therefore focus on encouraging existing residents to visit from a wider reach and this could include additional car parking and toilet provision. The suitability of the park to provide SANG is clear and there is likely to be value in enhancing Mincinglake Valley Park in order to draw in additional visitors in the future.

4.7 Proposed Enhancements

A number of enhancements to increase capacity and draw in additional visitors to the Valley Park have been suggested. The proposed enhancements are considered against the potential cost, deliverability, adherence to the SANG guidelines and the potential uplift. A summary of the proposed enhancements is presented in Table 4.20.

4.7.1 Car Parking – Option 1

As indicated during the establishment of the baseline of the Valley Park, there are currently two designated car parks for Mincinglake Valley Park. These car parks provide a total of 20-25 parking spaces between them. The option of increasing the capacity of the car park at Stoke Hill could be explored and internal discussions between DWC and DWT have indicated that this could provide an additional 8-10 new spaces. This would be achieved by marking out bays and marginally expanding

the size of the car park. A map identifying the location of the Stoke Hill car park is presented in Figure 4.4.

Deliverability
The land proposed for the car park is currently owned by ECC and under the management of DWT. However, there is a community hall adjacent to the car park and users of the building often use the Stoke Hill car park. Users of the community hall will need to be consulted prior to any expansion/alterations to the existing car park at Stoke Hill. It is therefore considered that the deliverability of the option is moderate at present.

Delivery Timeframe
The delivery timeframe of the option is likely to be moderate given that a consultation between all users of the car park is likely to be required prior to any improvements taking place. Once consultation is undertaken, delivery of the option would be short term.

Costs
The estimated costs of improvements to the car park and future maintenance are summarised in Tables 4.8 and 4.9.

Creation Costs

Option	Cost	Total Cost
Car park expansion with associated infrastructure.	£20,000.00	£20,000.00
	Total	**£20,000.00**

Table 4.8 Creation Costs

* Costs are estimates based on figures provided by DWT and advised by ECC and take into account recent rises in inflation. Costs exclude VAT. Costs assume the capacity of the car park is increased from 8 to 10 spaces and new infrastructure comprises consolidated stone with concrete bay markings.

Maintenance Costs

Option	Cost/year	Total Cost (30 Years)
Car park maintenance	£792.00	£23,760.00
	Total	**£23,760.00**

Table 4.9 Annual Maintenance Costs

* Costs are estimates based on figures provided by DWT and take future rises inflation costs into account. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts
The majority of the car park comprises hard standing and improvements to the existing infrastructure will not have any detrimental effects on protected species and habitats. However, expanding the size of the car park could result in the loss of

surrounding habitats which include grassland, broad-leaved woodland and semi-mature trees. Any losses in habitats will need to be fully compensated in other areas to avoid an overall net loss in habitats.

Estimated Uplift
Data from visitor Interviews gathered by Liley (2015), indicated that 62% of visitors to Ludwell and Riverside Valley Park visited the parks for a duration of 30 minutes to an hour. It is reasonable to assume that the surveyed visitors who travelled to the Valley Parks by car visited for a longer duration. It could therefore be reasoned that a single space within a car park could be filled with 6 different vehicles over a 12-hour period (7am-7pm),

In 2021, the average car occupancy in the UK for all journey types was 1.6 people per vehicle (Department of Transport, 2022). Using this data, it is estimated that delivering the car park with an additional 8-10 spaces could result in 76 - 96 additional users per day.

Adherence to SANG Guidelines
The delivery of a new car park for the Valley Park adheres to the Natural England SANG Guidelines (2021), which state that there must be parking on sites over 4ha in size (unless the site is intended for use within 400m only).

4.7.2 Footpath Enhancements – Option 2

As indicated during the establishment of the baseline of the Valley Park, there are currently a number of footpaths/desire lines through the park. Many of the official footpaths within the site were surfaced at different times and consequently the condition of the footpaths varies greatly. It is proposed to resurface one route through the site which will provide a consistent surface suitable for a wide range of users including those with limited mobility. Enhancements to footpaths would be undertaken with the aim of creating unsurfaced, safe routes from the car parks to avoid the site becoming too urban in feel. A summary of the proposed route to be enhanced is presented in Figure 4.7

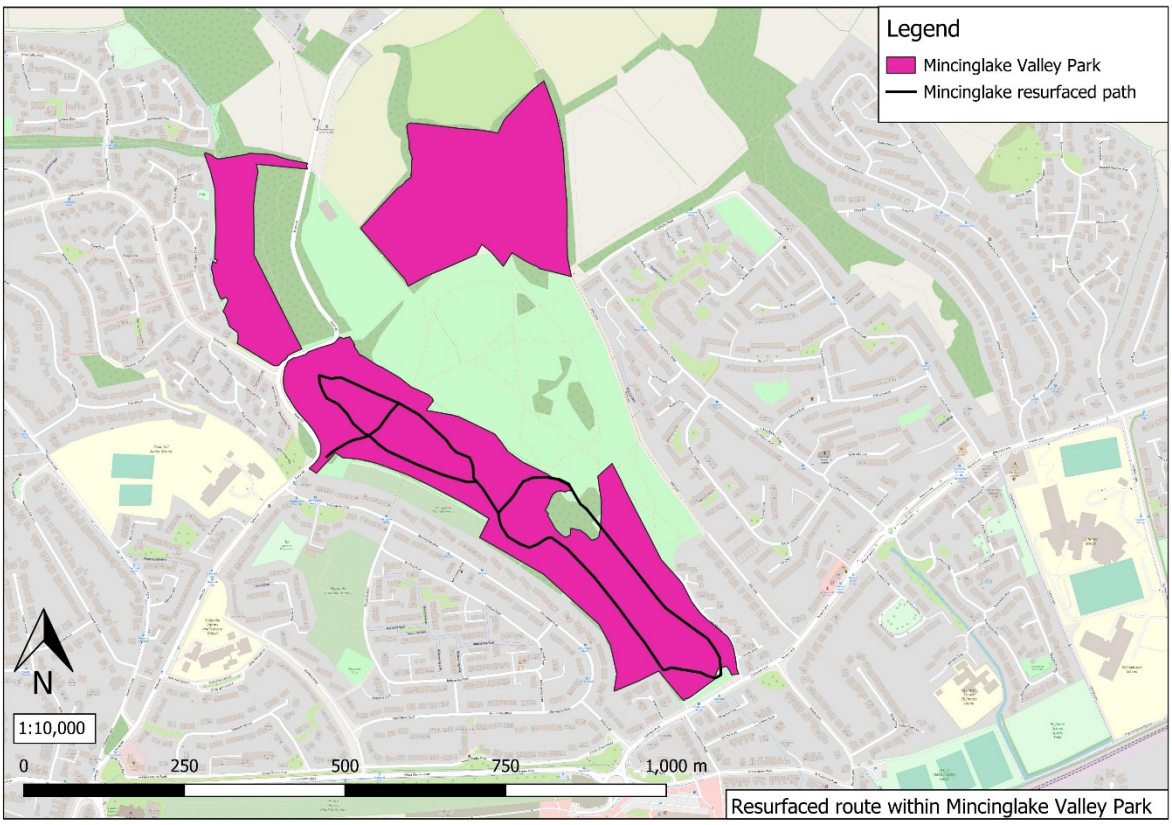

Figure 4.7 Resurfaced route within Mincinglake Valley Park

Deliverability
Given that the site is owned by ECC and managed by DWT, it is unlikely there will be any significant challenges in resurfacing the route following its approval. It is therefore considered that the deliverability of the footpath is high at present.

Delivery Timeframe
It is likely that the delivery timeframe for a new footpath would be relatively short following the acquisition of funds to facilitate its creation.

Costs
The estimated costs for footpath resurfacing and future maintenance are summarised in Tables 4.10 and 4.11.

Creation Costs

Option	Cost/metre	Total Cost
1,835m of Footpath improvements	£22.50/metre to top dress existing path*	£41,287.00
	Total	**£41,287.00**

Table 4.10 Creation Costs

*Costs are estimates based on figures provided by DWT and advised by ECC and take into account recent rises in inflation. Costs exclude VAT.

Maintenance Costs

Option	Average Cost/Year	Total Cost (30 Years)
Footpath Maintenance	£653.36*	£19,601.00
	Total	**£19,601.00**

Table 4.11 Annual Maintenance Costs

*Costs are estimates based on figures provided by DWT and advised by ECC and take future rises inflation costs into account. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts

The proposed route to be resurfaced passes through a mix of habitats including broadleaved woodland and grassland. There is already an existing path along this route and resurfacing the route is unlikely to result in any detrimental impacts to the habitats adjacent to the path, providing the width of path remains unchanged. However, establishment of an improved path could increase the usage of the route, leading to increased disturbance to wildlife in these areas. This could be particularly pronounced in the woodland areas, where nesting birds are likely to be present.

Estimated Uplift

It is estimated that the proposed creation/improvements will result in additional visits to the Valley Park from a variety of user groups, including those with limited mobility.

Adherence to SANG Guidelines

The delivery of new/improved footpaths for the Valley Park adheres to criteria 7 and 8 in the Natural England SANG Guidelines (2021). These criteria include ensuring that all paths and safe, well maintained and mostly unsurfaced.

4.7.3 Improved Cycling Provision – Option 3

As indicated during the establishment of the baseline of the Valley Park, cycling provision within the park is very limited. There are no designated cycle paths through the site and there are only four bike racks provided within car parks. Two of these are located at the car park off Calthorpe Road and two are located outside the

community hall at the Stoke Hill car park. Improvements to cycling provision should focus on providing additional bike racks (Sheffield Stands) in secure well-lit areas of the park so that users can travel to the site by bike and store their bike whilst exploring the park. It is recommended to install approximately 15 bicycle racks (Sheffield Stands) on hard standing areas at each car park to encourage access to the site via cycling. A summary of proposed bike rack locations is presented in Figure 4.8

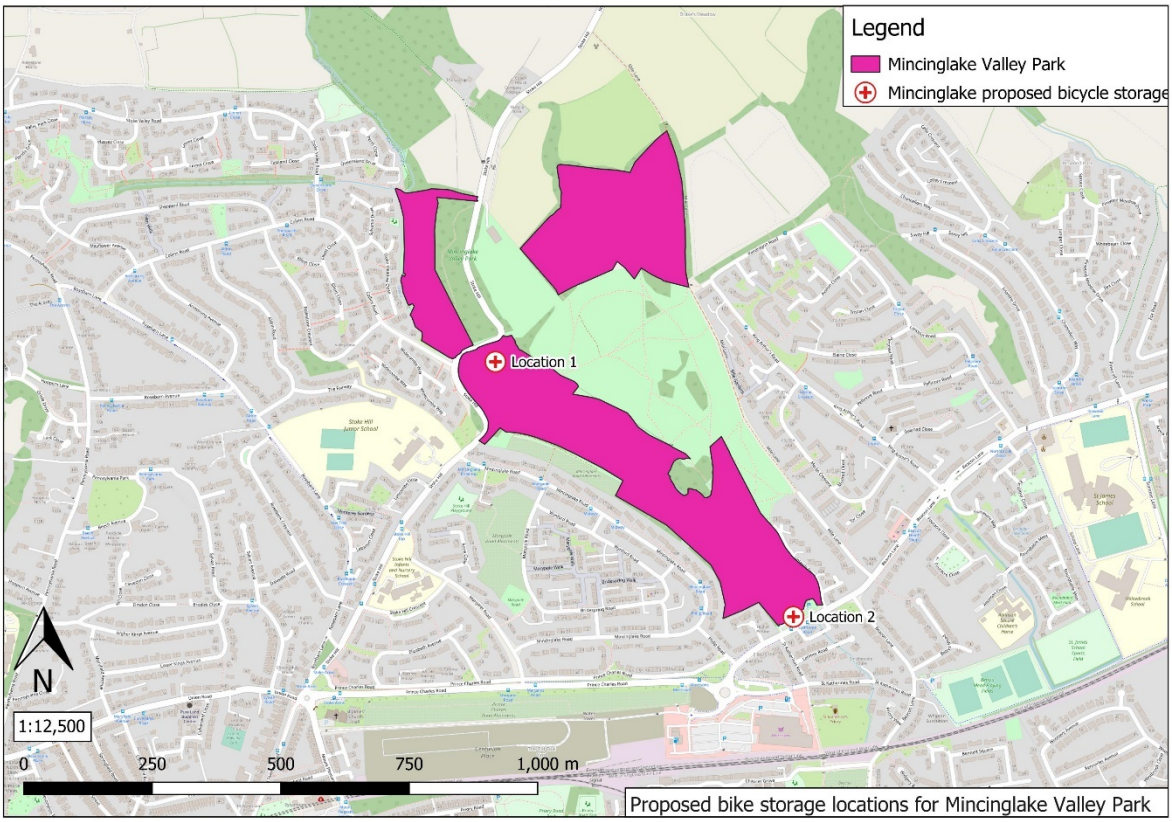

Figure 4.8 Proposed bike rack locations

Deliverability
Location 1 highlighted in Figure 4.8 is located within the boundary of DWT managed land and Location 2 is outside of the area currently managed by DWT. This could result in some challenges in delivery of the bicycle storage areas at Location 2. The relevant landowners would need to be consulted and negotiated with and this can be a lengthy process. It is therefore considered that the deliverability of bicycle racks is moderate for Location 2 or short for Location 1.

Delivery Timeframe
It is likely that the delivery timeframe for bicycle racks would be relatively short following permission from landowners and acquisition of funds to facilitate their installation. Furthermore, there is likely to be minimal additional infrastructure required. It is therefore likely that the timeframe for delivery would be short.

Costs
The estimated costs bicycle storage units/lockers and future maintenance are summarised in Tables 4.12 and 4.13.

Creation Costs

Option	Cost/unit	Total Cost
30 x Bike Racks (Sheffield Stands)	£250.00*	£7,500.00
	Total	**£7,500.00**

Table 4.12 Creation Costs

* Costs are estimates based on figures advised by ECC and take into account recent rises in inflation. Costs exclude VAT.

Maintenance Costs

Option	Cost/year	Total Cost (30 Years)
Bike Rack Maintenance	£1,903.00	£57,090.00
	Total	£57,090.00

Table 4.13 Annual Maintenance Costs

*Costs are estimates based on figures advised by ECC and take future rises inflation costs into account. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts
There are unlikely to be any disenable impacts to protected species and habitats provided that bicycle storage is delivered on existing hard standing areas.

Estimated Uplift
The proposed bicycle storage units could result in additional visits to the Valley Park. If a single bike rack could be utilised by 6 different bikes over a 12-hour period (7am-7pm) then it is estimated that delivering 30 bike racks could result in 180 additional users per day.

Adherence to SANG Guidelines
The provision of bicycle storage units does not address any essential or desirable criteria within the Natural England SANG Guidelines (2021). However, improving cycling provision around the Valley Park accords with the objective of getting people to use the Park and hence drawing visitors away from the European sites and is in accordance with the principles of Liveable Exeter which aims to invest in infrastructure to ensure that walking and cycling are the favoured choice of transportation in the future (Exeter City Council, 2019).

4.7.4 Provision of Toilet Facilities – Option 4

In order to improve the facilities in the park, it is proposed to provide toilet facilities adjacent to the car park off the Stoke Hill entrance within the northern extent of the

site. Providing toilet facilities will have the dual purpose of improving Valley Park visitor experience and it will also provide an important toilet facility for ramblers walking the Green Circle, part of which runs through Mincinglake Valley Park. Information gathered by Exeter and Cranbrook Live and Move has highlighted that there are a lack of public toilet facilities on the Green Circle walking route. Providing toilet facilities will therefore benefit both regular users of the Valley Park, as well as those who use it in a more transitory capacity. The proposed location of the toilet facilities is presented in Figure 4.9

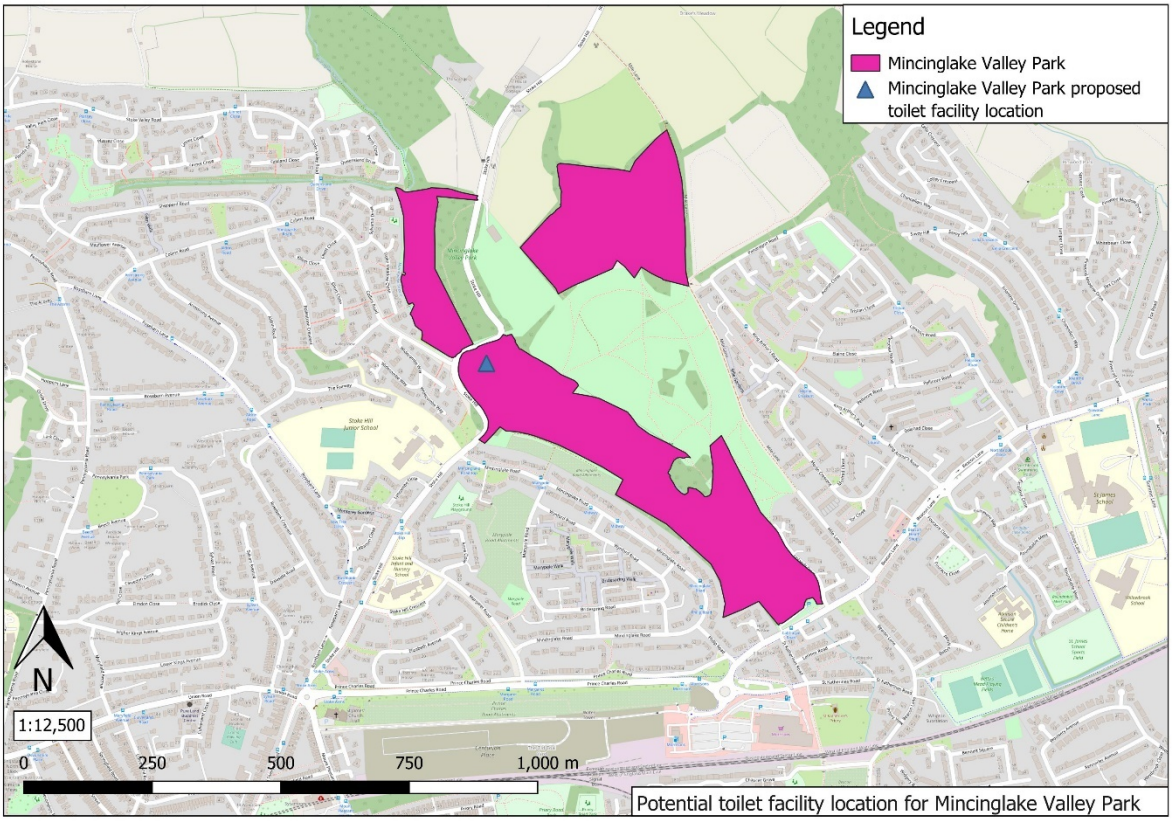

Figure 4.9 Proposed location for toilet facility

Deliverability

The proposed location for the toilet facilities is located within the area owned by ECC and managed by DWT. The creation of new toilet facilities will require new infrastructure and this is likely to require planning permission. The option is also likely to be expensive it is therefore considered that the deliverability of the option is moderate.

Delivery Timeframe

The land suggested for the toilet is within the area owned by ECC and managed by DWT. The construction of the infrastructure and toilets is likely to require planning permission which will increase the delivery timeframe of the option. Overall, the delivery timeframe for the option is considered to be moderate.

Costs

The estimated costs for the delivery of toilet facilities and future maintenance are summarised in Tables 4.14 and 4.15

Creation Costs

Option	Cost/unit	Total Cost
Provision of Toilet Facilities	£35,000.00	£35,000.00
	Total	**£35,000.00**

Table 4.14 Creation Costs

* Costs are estimates based on figures advised by DWT and take into account recent rises in inflation. Costs exclude VAT.

Maintenance Costs

Option	Average Cost/Year	Total Cost (30 years)
Maintenance of Toilet Facilities	£1,585.00	£47,550.00
	Total	**£47,550.00**

Table 4.15 Annual Maintenance Costs

*Costs are estimates based on figures provided by DWT and take future rises inflation costs into account. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts

Providing facilities is unlikely to have to have any discernible impacts on protected species and habitats, provided the facilities are constructed on existing hand standing areas and any required lighting is kept below 0.5lux in areas deemed to be suitable for foraging/commuting bats.

Estimated Uplift

Providing well-advertised toilet facilities is likely to provide an uplift in visitor numbers within the park and will also improve the visitor experience within the park and provide a public toilet on Exeter's Green Circle Walking route.

Adherence to SANG Guidelines

The creation of toilet facilities does not address any essential or desirable criteria within SANG checklist and no reference is made to it within the wider Natural England SANG Guidelines (2021).

	Creation Cost	**Maintenance Costs (30 Years)**	**Uplift Provided** (Y/N)	**Delivery Timeframe** (Long, Moderate, Short)	**Deliverability** (Low, Moderate, High)	**Adherence to SANG Guidelines** (Y/N)	**Implemented** (Y/N)
Option 1 – Car park expansion	£20,000.00	£23,760.00	Y	Moderate	Moderate	Y – Addresses Criteria 1 on SANG Checklist	Y
Option 2 – Footpath enhancements	£41,287.00	£19,601.00	Y	Short	High	Y – Addresses Criteria 7 & 8 on SANG Checklist	Y
Option 3 – Improved cycling provision	£7,500.00	£57,090.00	Y	Short	Moderate	Y – Addresses Criteria 2, 7 and 8 in SANG Checklist	Y
Option 4 – Providing toilet facilities	£35,000.00	£47,550.00	Y	Moderate	Moderate	N – Does not address SANG criteria but would provide uplift in visitor numbers.	Y
Total estimated cost of all measures including annual maintenance: £251, 788.00							

Table 4.16 Summary of all options in Mincinglake Valley Park with predicted cost, delivery timeframe, deliverability, estimated uplift and adherence to SANG guidelines

4.8 Discussion

The proposed enhancements outlined in Section 4.7 have the potential to improve the visitor experience, increase visitor numbers and improve access for a variety of users in Mincinglake Valley Park. These enhancements have been assessed against several criteria including cost, delivery timeframe, deliverability and adherence to SANG guidance. This has enabled comparisons between measures to ascertain which enhancements should be implemented and are likely to deliver the greatest benefits and reduce pressure on European sites. It is considered that options 1,2, and 3 are the most suitable options for implementation in the future. A summary of the enhancements suitable for implementation is presented in Table 4.21.

	Implemented (Y/N)	**Justification**
Option 1 – Car park expansion	Y	The option is the most cost-effective way to provide car additional car parking capacity for Mincinglake Valley Park and the deliverability of the option is considered high.
Option 2 – Footpath improvements	Y	Improvements to footpaths will encourage a wider range of people to visit the site and has the potential to distribute visitors more evenly throughout the site.
Option 3 – Improved cycling provision	Y	Providing bicycle storage is likely to result in a small increase in visitor numbers and the measure is in keeping with Liveable Exeter's vision of promoting cycling as a main method of transport in the city in the future.
Option 4 – Provision of toilet facilities	Y	Providing well-advertised toilet facilities is likely to provide an uplift in visitor numbers within the park and will also improve the visitor experience.

Table 4.17 Summary table with justification for implementation of selected options

4.9 Conclusion

The assessment of the baseline of Mincinglake Valley Park has indicated that the park has approximately 13.38ha available for SANG and has capacity to provide SANG mitigation for an approximately 1,672 residents. It is considered that the combination of the options summarised in Table 4.21 will provide uplift and increase the capacity of the site sufficiently to accommodate additional visitors. It will be important to monitor the effectiveness of these enhancements through the provision of automated visitor counters placed in strategic locations around the park and these sensors will also provide more accurate data on the current capacity of the park.

5 Northbrook Valley Park

South Entrance into Northbrook Valley Park (DWT)

Northbrook Valley Park

5.1 Introduction

The Northbrook Valley Park is proposed as a new Valley Park in the Exeter Plan and is located to the north of Riverside Valley Park and to the south of Ludwell Valley Park. The site is a former pitch and putt golf course and following its closure in 2019, a public consultation was carried out by ECC & DWT, which outlined proposals to create a wild arboretum and community space. The results from the consultation indicated that 96% of respondents supported the vision and a number of new ideas and proposals have been included in the Northbrook Park Proposals (Devon Wildlife Trust, 2021). This included improving access around the site, reducing barriers for people/wildlife and addressing the need for both cycle and pedestrian routes through the site.

The area proposed for enhancement by DWT and therefore under consideration for SANG encompasses an area approximately 5.38ha in size. The boundary of the study area is outlined in Figure 5.1.

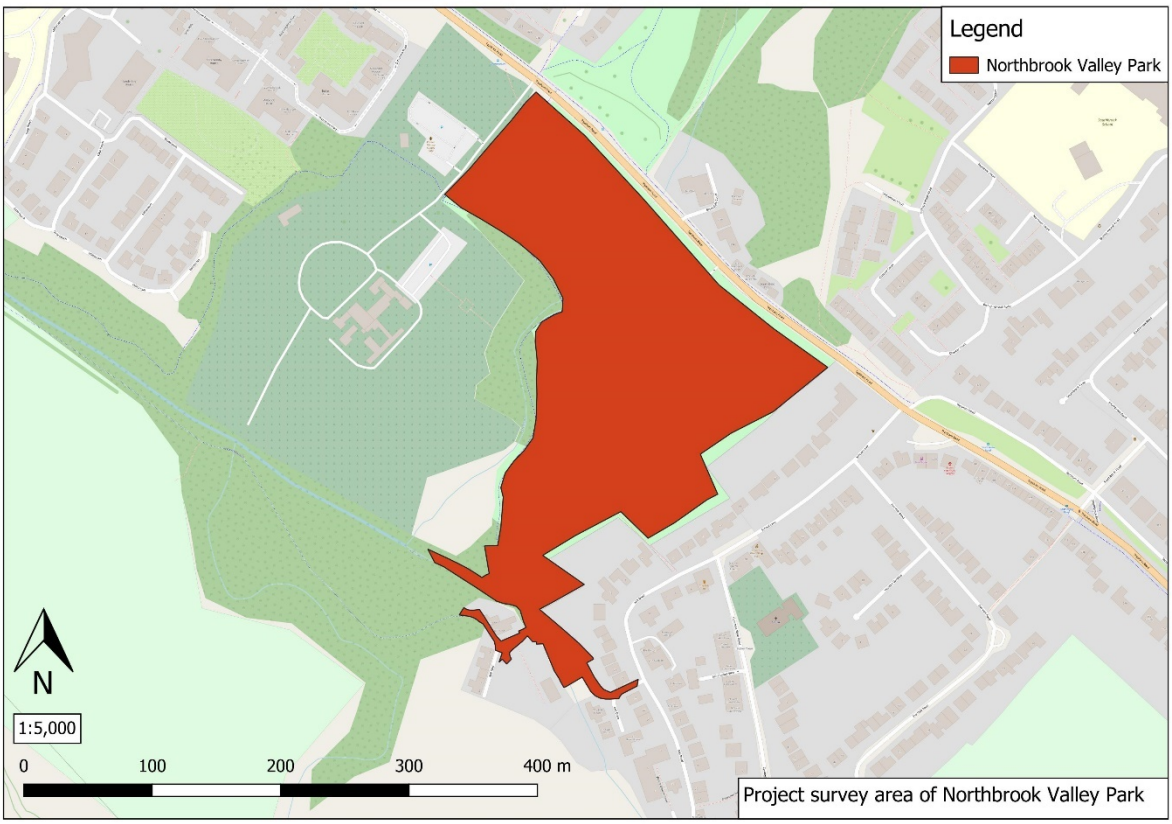

Figure 5.1 Northbrook Valley Park Survey Area

At present, the site is a mixture of rough grassland and mature trees with small areas of woodland on the fringes of the park. The Northbrook watercourse bisects the site, flowing on a north to south orientation. The watercourse is fairly urban in nature, with straightened sections and limited bankside vegetation. The park is strategically important for wildlife as it is part of a wider green corridor that runs through the city forming a link between Riverside and Ludwell Valley Park. The site is set within a

wider urban landscape and is bound by residential development to the west, a crematorium to the east and publicly accessible greenspace to the north and south.

The topography of the park is gently undulating, with views across the city at higher elevations and flatter areas adjacent to the watercourse. The park also forms part of the Exeter Green Circle walking route which bisects the site, following the existing paved footpath that runs through the park.

5.2 Analysis of Visitor Numbers & Origins of Access

5.2.1 Visitor Numbers

At present, there are no visitor data available for proposed Northbrook Valley Park, as the site has only recently come under DWT's management and visitor surveys have never been carried out. Consequently, visitor numbers are currently unknown, and it is not possible to accurately estimate the potential of the park to provide SANG. However, this is a newly proposed Valley Park and site visits have suggested that the site is not particularly busy and is predominately used by dog walkers, pedestrians and cyclists passing through the site to access Topsham Road or the land to the south of the site.

The site represents a new Valley Park and it could therefore be reasoned that the park provides a total of 5.38ha for SANG use in the future. The Natural England guidance specifies that 8ha of SANG should be provided per 1,000 residents for new SANG sites. If this principle is applied to Northbrook Valley Park, the site could provide SANG mitigation for approximately 672 new residents in Exeter in the future.

5.2.3 Visitor Origins/Access Points

Northbrook Valley Park has a number of access points. Site visits have confirmed that there is a total of four access points into the park. Two of these are located on the northern boundary of the site and are accessed off Topham Road. The other two access points are located on the southern boundary of the site and are accessed off Mill Lane and Mill Road.

5.3 Type of Usage

There are no data currently available which detail how the site is utilised by visitors and observations within this section are purely anecdotal.

5.3.1 Dog Walking

Site visits suggest that Northbrook Valley Park is used by dog walkers. Dogs can currently roam freely off the lead throughout the park at all times of the year, as the park is not grazed by livestock.

5.3.2 Informal Sport/Recreation

Whilst the site was previously a utilised as a golf course, the management regime has now been relaxed and this has resulted in the development of tussocky

grassland in many areas. As a result, the site is no longer suitable for informal sport and recreation.

5.3.3 Nature Rich Areas

The habitats within Northbrook Valley Park are currently in a transition period as the management of the site is transferred over to DWT. The site is likely to have had limited value to wildlife during its time as golf course and the frequently mown grassland areas would not have supported a significant diversity of insects and invertebrates. However, there are several semi-mature and mature native trees scattered throughout the park and these provide important habitat for a number of insects and invertebrates, as well nesting/roosting habitat for birds/bats.

The grassland management regime on the site has recently been relaxed and this has facilitated the development of a more tussocky grassland. At present, the grassland is not particularly species rich, however this is likely to change in the future, as the site is managed by DWT with the aim of increasing biodiversity within the park. Whilst the park is in a transition phase from a biodiversity perspective, it is still strategically important for wildlife, as it forms part of a wider green corridor that runs through the city linking Ludwell, Northbrook and Riverside Valley Park together. This connected network of greenspace through the city provides vital refuge habitat for many species within a broadly urban environment.

5.3.4 Other Uses

In the absence of visitor surveys, site visits and anecdotal evidence suggest that the site is utilised by dog walkers, ramblers, cyclists and users seeking quiet recreation.

5.4 Infrastructure

5.4.1 Car Parking

There are car parking facilities available at Northbrook Valley Park, but these are not currently available for use by the public and a locked barrier prevents vehicle access. This car park was built for users of the golf course whilst it was operation. Whilst the course has now closed, the infrastructure still exists and would provide up to 30 spaces for vehicles if it was available for use. The proposed location of the car park is presented in Figure 5.2

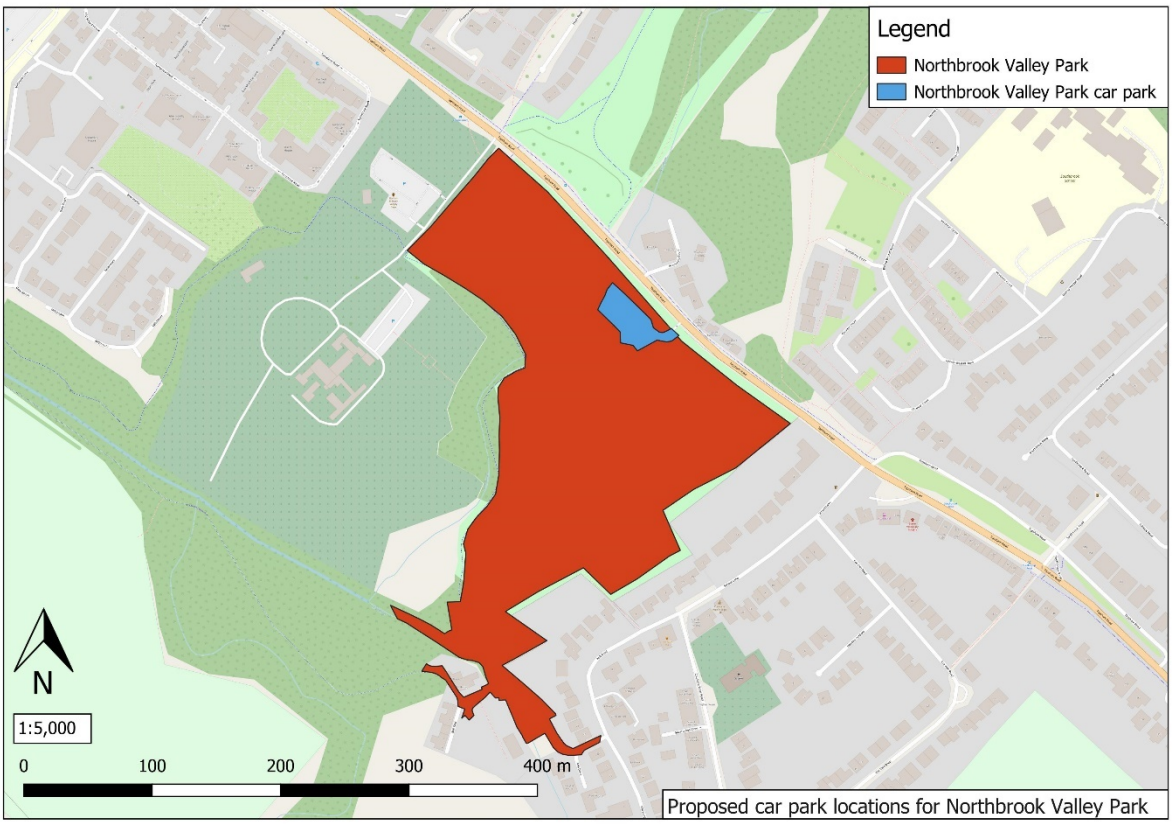

Figure 5.2 Northbrook Valley Park Proposed Car Park

5.4.2 Toilet Facilities

There are currently no public access toilet facilities within Northbrook Valley Park. However, toilets were provided within the building associated with the Pitch and Putt Golf Course.

5.4.3 Cafés & Food Establishments

There are currently no cafés or food establishments within Northbrook Valley Park. However, Café facilities were provided within the building associated with the Pitch and Putt Golf Course.

5.4.4 Access Routes

At present there is only one official access route through the park. This route consists of a paved path that runs from Mill Lane in the southern extent of the park, to Topsham Road in the northern extent of the site. Whilst this path is in relatively good condition, it is frequently utilised by both cyclists and walkers and the narrow width of the path and blind corners means there is a risk of collisions. As a result, a number of desire lines have developed since the site has been opened up to the public and these cross many of the grassland areas throughout the site. The nature of desire lines mean they are uneven with some vegetation encroachment making them unsuitable for people with mobility issues and pushchair users. A map identifying the

access routes through the site including paved paths and desire lines is presented in Figure 5.3.

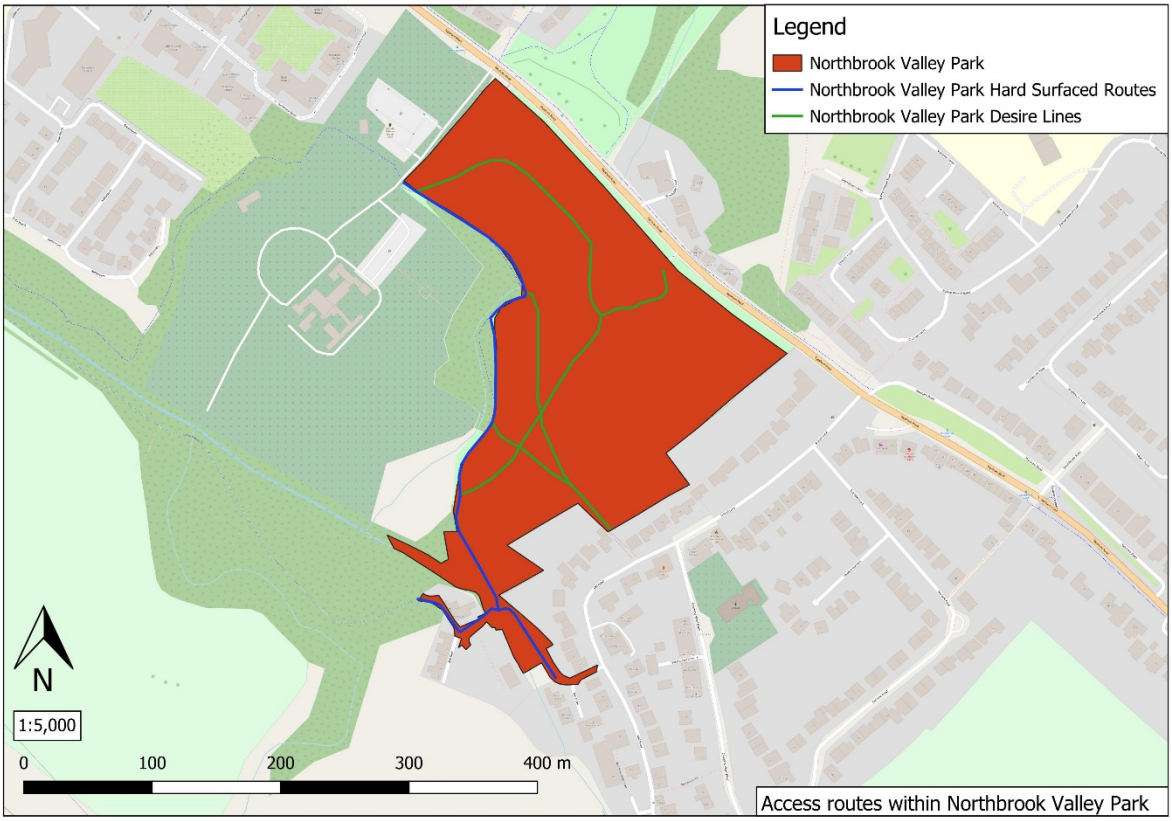

Figure 5.3 Access Routes in Northbrook Valley Park

5.5 Proximity to Future Local Plan Allocations

Northbrook Valley Park is not located directly adjacent to any future allocations as outlined in The Exeter Plan Outline Draft Plan (2022). However, the park is within 0.5km of one future Local Plan allocation that will be delivered through the Exeter Local Plan in the next 20 years. This allocation is associated with a site located off Chestnut Avenue and will deliver approximately 26 new homes. Whilst this is a relatively small allocation, there are a number of larger allocations within the wider city and the location of the park between Riverside and Ludwell Valley Park means it is highly likely to experience a sizeable increase in usage in the future. A map detailing the location of the Chestnut Avenue allocation is presented in Figure 5.4.

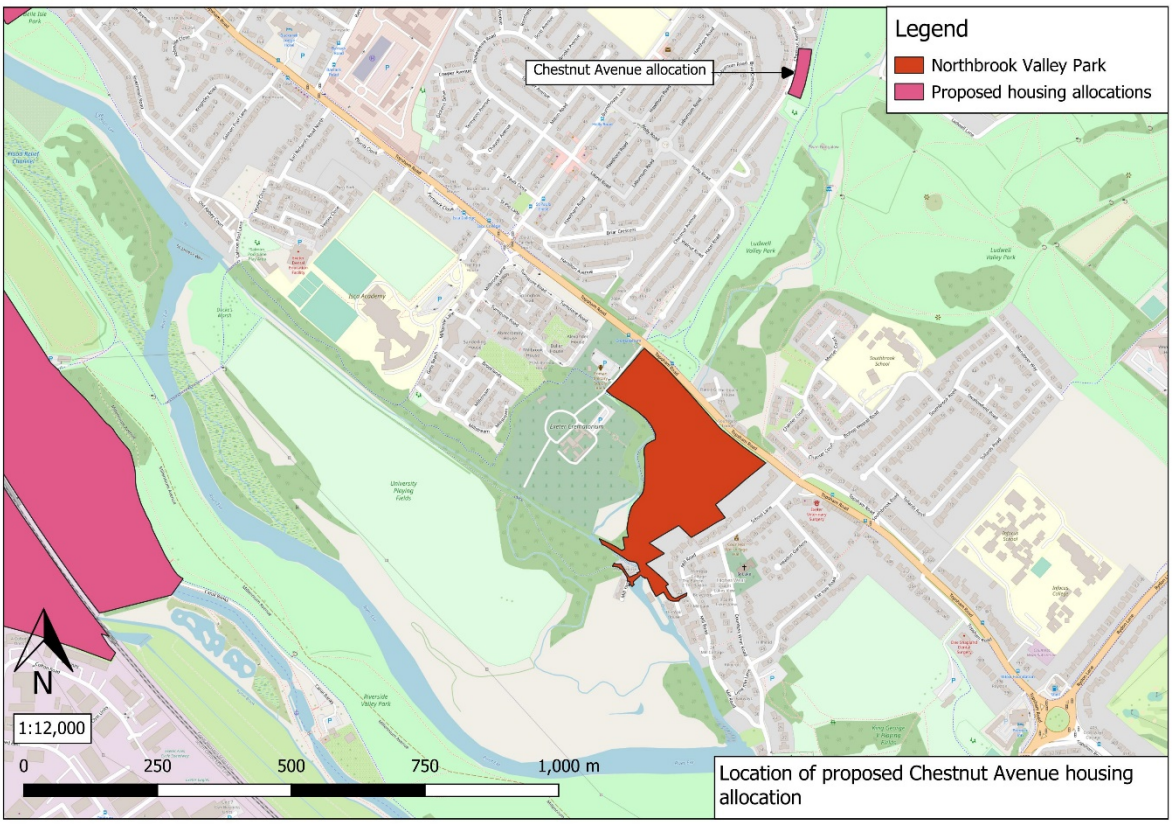

Figure 5.4 Location of nearby housing allocations

5.6 Analysis Against SANG Criteria

The analysis of data in Sections 5.3 and 5.4 has allowed Northbrook Valley Park to be assessed against the Guidelines for Creation of Suitable Alternative Natural Greenspace (SANG), (Natural England, 2021) to ascertain how many of the essential and desirable criteria the site already meets. The result of this assessment is presented in Table 5.1.

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
	1	Parking on-site	N – car park not currently accessible to public.
	2	Circular walk of 2.3-2.5km	N
	3	Car parks easily and safely accessible by car and clearly sign posted	N - car park not currently accessible to public.
	4	Access points appropriate for particular visitor use the SANG is intended to cater for	Y – Though some access points narrow and not suitable for some users.

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
Essential Criteria	5	Safe access route on foot from nearest car park and/or footpath	N - car park not currently accessible to public.
	6	Circular walk which starts and finishes at the car parks	N
	7	Perceived as safe– no tree and scrub cover along part of walking routes	Y
	8	Paths easily used and well maintained but mostly unsurfaced	N – Main route paved and desire lines not maintained.
	9	Perceived as semi-natural with little intrusion of artificial structures	Y
	10	Range of habitats should be present	Y – Not required for sites smaller than 12ha.
	11	Access unrestricted – plenty of space for dogs to exercise freely and safely off the lead	Y
	12	No unpleasant intrusions (e.g. sewage treatment smells etc.)	Y – No unpleasant intrusions
Desirable Criteria	13	Clearly sign posted or advertised in some way	N
	14	Leaflets/website advertising their location to potential users	N
	15	Can dog owners take dogs from the car park to the SANG safely off the lead	N
	16	Gently undulating topography	Y
	17	Access points with signage outlining the layout of the SANG and routes available to visitors	N
	18	Naturalistic space with areas of open countryside and dense and scattered trees and shrubs. Provision of open water is desirable	N
	19	Focal point such as a viewpoint or monument within the SANG	N
			Total: 7/19

Table 5.1 Northbrook Valley Park assessed against SANG criteria (Natural England, 2021)

5.6.1 Discussion

Northbrook Valley Park in its current state passes 6/12 of the essential criteria needed for a site to be considered suitable for SANG provision. It also passes 1/7 of the desirable criteria giving a total score of 7/19. Whilst this score is low, the score could be significantly increased with some relatively simple enhancements. These enhancements would draw in additional visitors as well as improve the visitor experience within the park. Whilst the capacity of the park to absorb additional recreational pressure has not yet been accurately quantified, as this is a newly proposed Valley Park it is assumed that the park provides 5.38ha for SANG use and the site could provide SANG mitigation for approximately 672 new residents in Exeter in the future. It is likely that the site will have a strategic role in diverting new and existing residents away from European sites providing a SANG function.

5.7 Proposed Enhancements

A number of enhancements to increase capacity and draw in additional visitors into the Valley Park have been suggested. The proposed enhancements are considered against the potential cost, deliverability, adherence to the SANG guidelines and the potential uplift. A summary of the proposed enhancements is presented in Table 5.12.

5.7.1 Car Parking – Option 1

As indicated during the establishment of the baseline of the Valley Park, there is existing infrastructure on the site previously provided for the Northbrook pitch and putt golf course. Whilst the course has now closed, this infrastructure still exists and could be easily utilised as a car park for the Northbrook Valley Park. The car park could provide up to 30 spaces for vehicles once bays have been marked. A map identifying the proposed location of the car park is presented above in Figure 5.2.

Deliverability
The land proposed for the car park is currently owned by ECC and under the management of DWT. There is not likely to be any significant challenges in delivering the car park, should the option be taken forward. It is therefore considered that the deliverability of the option is high at present. There is also an existing entrance to the car park off Topsham Road, which reduces the need for significant additional infrastructure to make the car park accessible. However, the area will require parking bays to be marked out and a limited amount of resurfacing may be needed.

Delivery Timeframe
The delivery timeframe of the option is likely to be short, as the site is owned by ECC and under the management of DWT.

Costs
The estimated costs of delivering the car park and future maintenance are summarised in Tables 5.2 and 5.3.

Creation Costs

Option	Cost	Total Cost
Car park delivery	£20,000.00*	£20,000.00
	Total	**£20,000.00**

Table 5.2 Creation Costs

* Costs are estimates based on figures provided by DWT and advised by ECC and take into account recent rises in inflation. Costs exclude VAT. Delivery will be through lining, signage and targeted repairs.

Maintenance Costs

Option	Cost/year	Total Cost (30 Years)
Car park maintenance	£792.00	£23,760.00
	Total	**£23,760.00**

Table 5.3 Annual Maintenance Costs

*Costs are estimates based on figures provided by DWT and advised by ECC and take future rises inflation costs into account. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts

The area proposed for the car park currently comprises hard standing which is in moderate condition. Vegetation is beginning to encroach into some hard standing areas, but this is currently limited. Overall, the creation of the car park will have very limited impact on protected species and habitats.

Estimated Uplift

Data from visitor Interviews gathered by Liley (2015), indicated that 62% of visitors to Ludwell and Riverside Valley Park visited the parks for a duration of 30 minutes to an hour. It is reasonable to assume that the surveyed visitors who travelled to the Valley Parks by car visited for a longer duration. It could therefore be reasoned that a single space within a car park could be filled with 6 different vehicles over a 12-hour period (7am-7pm),

In 2021, the average car occupancy in the UK for all journey types was 1.6 people per vehicle (Department of Transport, 2022). Using this data, it is estimated that delivering the car park with 30 spaces could result in 288 additional users per day.

Adherence to SANG Guidelines

The delivery of a new car park for the Valley Park adheres to the Natural England SANG Guidelines (2021), which state that there must be parking on sites over 4ha in size (unless the site is intended for use within 400m only).

5.7.2 Footpath Creation – Option 2

As indicated during the establishment of the baseline of the Valley Park, there are currently a limited number of official footpaths through the site, but a number of desire lines have formed. At present, the only surfaced path is utilised by both walkers and cyclists. It is proposed to enhance the existing desire lines into official footpaths and designate the existing surfaced path as a cycle path. The creation of new official footpaths would be undertaken with the aim of creating mostly unsurfaced, safe routes to avoid the site becoming too urban in feel, and have been identified as part of DWT proposals for the site. A map of the desire lines to be enhanced into footpaths is presented above in Figure 5.3.

As part of the improvements to footpaths, it is recommended that the access point into the park off Mill Road is improved to increase safety. At present, the alley providing access into the site is overgrown with overhanging vegetation creating a dark area and it is likely that the access route feels unsafe to many users. The overhanging vegetation should be regularly trimmed to ensure an open and well-lit access point.

Deliverability
The site is owned by ECC and managed by DWT and it is unlikely there will be any significant challenges in creating new footpaths on the site. Furthermore, providing new paths and access points is in line with the results of the public consultation carried out by ECC & DWT. It is therefore considered that the deliverability of new footpaths is high at present.

Delivery Timeframe
It is likely that the delivery timeframe for new footpaths would be short, provided planning permission can be obtained.

Costs
The estimated costs of footpath creation and future maintenance are summarised in Tables 5.4 and 5.5.

Creation Costs

Option	Creation Cost	Total Cost
Footpath Creation	£15,000.00	£15,000.00
	Total	**£15,000.00**

Table 5.4 Creation Costs

*Costs are estimates based on figures provided by DWT and advised by ECC and take into account recent rises in inflation. Costs exclude VAT.

Management Costs

Option	Average Cost/Year	Total Cost (30 Years)
Footpath Maintenance	£653.36*	£19,601.00
	Total	**Total£19,601.00**

Table 5.5 Annual Maintenance Costs

*Costs are estimates based on figures provided by DWT and advised by ECC and take future rises inflation costs into account. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts
The new footpaths proposed for the site pass through areas of rough grassland and around scattered mature trees. Creating footpaths through these areas will result in a small loss of grassland habitats on the site. However, in other areas of the site grassland enhancements will be undertaken to increase the prevalence of wildflowers within the sward and this is likely to off-set the losses caused by the creation of footpaths.

Estimated Uplift
It is estimated that the proposed creation/improvements will result in additional visits to the Valley Park from a variety of user groups.

Adherence to SANG Guidelines
The delivery of new/improved footpaths for the Valley Park adheres to criteria 7 and 8 in the Natural England SANG Guidelines (2021). These criteria include ensuring that all paths and safe, well maintained and mostly unsurfaced.

5.7.3 Visitor Centre/Learning Hub – Option 3

There is potential for the site to host a visitor centre or a learning Hub. This idea was discussed within the public consultation carried out by ECC and DWT in 2021 and has since gained traction. The centre could also function as the Valley Park's Visitor Centre. The purpose of which would be to celebrate the Valley Parks and provide information about the parks including their available facilities and locations. The centre could also provide toilet and cafe facilities.

At present, there are two options to deliver a visitor centre. These include refurbishing the existing building adjacent to the car park or demolishing the existing structure and constructing a new building fit for purpose. Both of these options are likely to have significant associated costs. However, the options have the potential to draw a significant number of additional visitors to the park and the potential of the options should be fully explored.

Deliverability
Whilst the site is owned by ECC and managed by DWT, there are likely to be challenges associated with delivering a visitor centre/learning hub on the site. Either

option will require planning permission and refurbishment/construction will take some time. Overall, it is considered that the deliverability of the option is moderate.

Delivery Timeframe
It is likely that the delivery timeframe for a visitor centre/learning hub would be moderate-long. The option will require planning permission and this can be a lengthy process. Additionally, construction/refurbishment of the building and associated infrastructure will take time.

Costs
The estimated costs of delivering the two options alongside future maintenance are summarised in Tables 5.6 and 5.7.

Creation Costs

Option	Cost	Total Cost
Refurbishment of existing structure	£80,000.00*	**£80,000.00**
Demolition of existing structure and construction of new bespoke building	Circa £165,000.00*	**£165,000.00**

Table 5.6 Creation Costs

* Costs are estimates based on figures calculated by DWC in 2022 and take into account recent rises in inflation.

Maintenance Costs

Option	Cost/year	Total Cost (30 Years)
Building maintenance for refurbishment option	£6,343.00	**£190,290.00**
Building maintenance for new build	£7,930.00	**£237,900.00**

Table 5.7 Annual Maintenance Costs

* Costs are estimates based on figures calculated by DWC in 2022 and take into account inflation.

Wildlife Impacts
There could be impacts on protected species through the construction/demolition of a visitor centre/learning hub. Roosting bats/nesting birds may be present in the existing building and there is potential for light spill into adjacent habitats during the construction and operational phase of the project. The potential impacts will need to fully quantified and avoided/mitigated in order to ensure there will be no detrimental effects on bat roosting/foraging habitats. It is likely that these issues will be addressed through the planning process.

Estimated Uplift
It is estimated that delivering a visitor centre/learning hub will result in a significant uplift in visitor numbers on the site.

Adherence to SANG Guidelines
The provision of a visitor centre/learning hub does not address any essential or desirable criteria within the Natural England SANG Guidelines (2021). However, it is likely that delivering the option will result in a significant uplift in visitor numbers to the site and the other Valley Parks, diverting visitors away from nearby European sites.

5.7.4 Provision of Interpretation Boards – Option 4

It is suggested that a number of interpretation boards could be installed on the site. These interpretation boards should provide detail on how the site is managed for biodiversity, clearly show the readers current location and highlight the available walking routes from their location. The proposed locations of interpretation boards is presented in Figure 5.5.

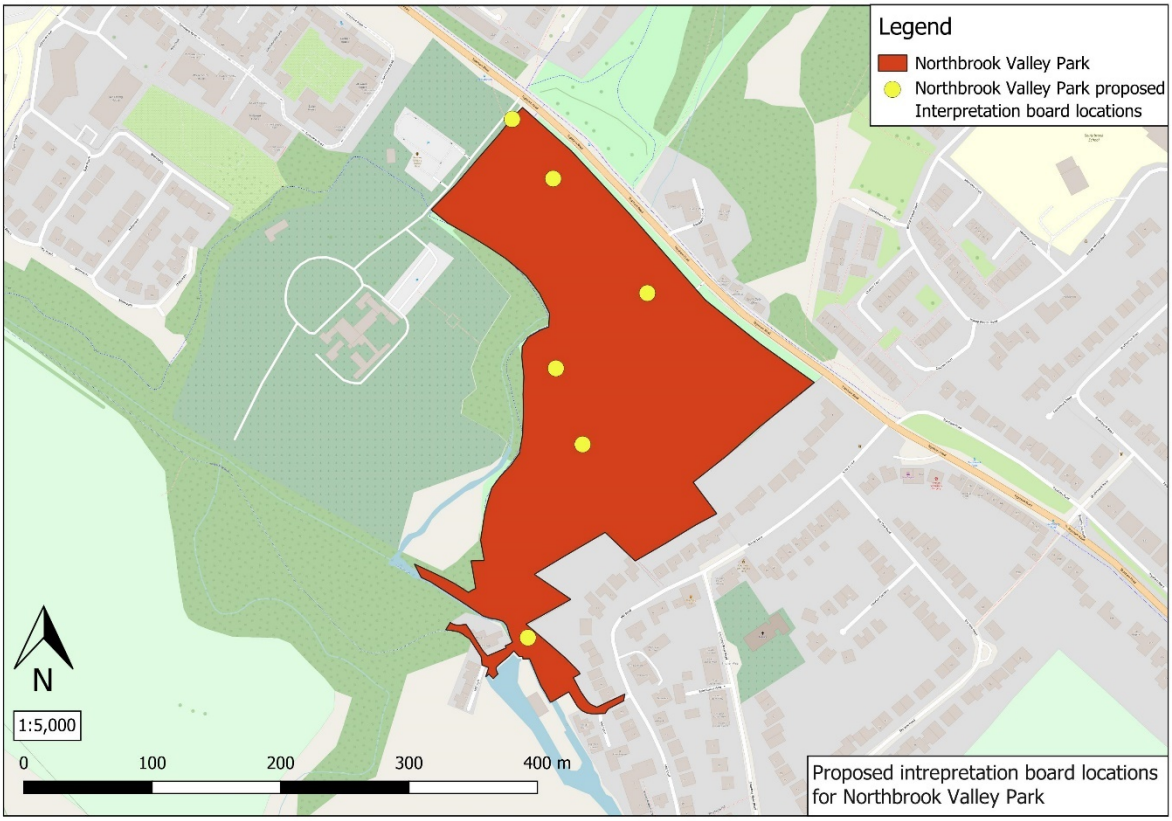

Figure 5.5 Proposed Locations of Interpretation Boards within Northbrook Valley Park

Deliverability
Given that the site is owned by ECC and managed by DWT, it is unlikely there will be any significant challenges in delivering interpretation boards across the site. It is therefore considered the deliverability of the option is high.

Delivery Timeframe
It is likely that the delivery timeframe for the interpretation boards would be short.

Costs
The estimated costs of creation and installation of interpretation boards and future maintenance are summarised in Tables 5.8 and 5.9.

Creation Costs

Option	Cost/unit	Total Cost
2 x Main interpretation board	£2,000.00/unit	£4,000.00
4 Smaller secondary signs	£500.00/unit	£2,000.00
	Total	**£6,000.00**

Table 5.8 Design and installation Costs

* Costs are estimates provided by DWT Communications Team and take into account recent rises in inflation. Costs exclude VAT.

Management Costs

Option	Average Cost/Year	Total Cost (30 years)
Maintenance of 2 x main interpretation board and 3 x full replacements	£634.00/year	£31,020.00
Maintenance of 4 x small secondary signs and 3 x full replacements	£15.80/year	£6,476.00
	Total	**£37,496.00**

Table 5.9 Annual Maintenance Costs

*Costs are estimates provided by DWT Communications Team and take future rises inflation costs into account. Full replacement of signs every 10 years is included to account for vandalism, wear and tear. However, it is likely that annual maintenance costs will vary significantly over the management period depending on inflation.

Wildlife Impacts
Creating and installing interpretation boards is unlikely to have any impact on protected species and habitats.

Estimated Uplift
The proposed interpretation boards could provide a small uplift in visitor numbers within the park. Placing the boards in strategic locations could better educate existing users on the biodiversity value of the site and encourage users to utilise all available footpaths and access points and highlight routes to the other Valley Parks

Adherence to SANG Guidelines
Installing interpretation boards addresses Criteria 17 within the Natural England SANG Guidelines (2021). The role and importance of interpretation boards in SANG is referenced in a case study present in the SANG guidelines and highlights the

importance of providing comprehensive signage, as it encourages users to care more about the site.

	Creation Cost	**Maintenance Costs (30 Years)**	**Uplift Provided** (Y/N)	**Delivery Timeframe** (Long, Moderate, Short)	**Deliverability** (Low, Moderate, High)	**Adherence to SANG Guidelines** (Y/N)	**Implemented** (Y/N)
Option 1 – Car parking	£20,000.00	£23,760.00	Y	Short	High	Y – Addresses Criteria 1 on SANG Checklist	Y
Option 2 – Footpath creation	£15,000.00	£19,601.00	Y	Short	High	Y – Addresses Criteria 7 & 8 on SANG Checklist	Y
Option 3 – Visitor centre/learning hub	£80,000 - £165,000.00	£190,290.00 - £237,900.00	Y	Moderate - Long	Moderate	N – Does not address SANG criteria	Y
Option 4 – Provision of interpretation boards	£6,000.00	£37,496.00	Y	Short	High	Y – Addresses Criteria 17 on SANG checklist	Y
Total estimated cost of all measures including annual maintenance: £392,147.00 – £ 524,757.00							

Table 5.12 Summary of all options in Northbrook Valley Park with predicted cost, delivery timeframe, deliverability, estimated uplift and adherence to SANG guidelines.

5.8 Discussion

The proposed enhancements have the potential to improve the visitor experience, increase visitor numbers and improve access for a variety of users in Northbrook Valley Park. These enhancements have been assessed against several criteria including cost, delivery timeframe, deliverability and adherence to SANG guidance. This has enabled comparisons between measures to ascertain which enhancements should be implemented and are likely to deliver the greatest benefits and reduce pressure on European sites in the future. It is considered that all the potential options outlined for Northbrook Valley Park are suitable for implementation. Some of these measures do not adhere to the current SANG guidelines and will be delivered as LPA Projects. A summary of the enhancements suitable for implementation is presented in Table 5.13

	Implemented (Y/N)	**Justification**
Option 1 – Car parking	Y	The option is considered a cost-effective way of providing a car parking for Northbrook Valley Park and the deliverability of the option is considered high.
Option 2 – Footpath creation	Y	Creation of new footpaths will encourage a wider range of people to visit the site and has the potential to distribute visitors more evenly throughout the site.
Option 3 – Visitor centre/learning hub	Y	Whilst the deliverability of the option is moderate and it is likely to take a long time to deliver, the option has potential to increase the visitor numbers on the site significantly.
Option 4 – Interpretation Boards	Y	Providing interpretation boards could result in a small uplift in visitor numbers and providing new signage which details new walking routes will encourage to users to explore new routes and the deliverability of the option is high.

Table 5.13 Summary table with justification for implementation of selected options

5.9 Conclusion

The assessment of the baseline of Northbrook Valley Park has indicated that the park has approximately 5.38ha available for SANG and has capacity to provide SANG mitigation for an approximately 672 new residents. It is considered that the combination of the options summarised in Table 5.13 will increase the capacity of the site and uplift visitor numbers.

6 Whitycombe Valley

View over Exeter from Whitycombe Valley Park (DWT)

Whitycombe Valley Park

6.1 Introduction

Whitycombe Valley Park is Exeter's smallest Valley Park (proposed for designation in the emerging Exeter Plan) and the DWT managed area of the park encompasses 1.98ha. The park is located on the northwestern outskirts of the city and is bordered by open countryside to the north, east and west and residential development to the south. The proximity of the park to a large residential area to the south means that it provides an important publicly accessible naturalistic greenspace for the local residents. The park comprises a mixture of wildlife rich meadow habitat, broadleaved woodland, scattered scrub and hedgerows, and the steeply sloping topography affords far reaching views over the city and down to the Exe estuary. The boundary of the study area is outlined in Figure 6.1.

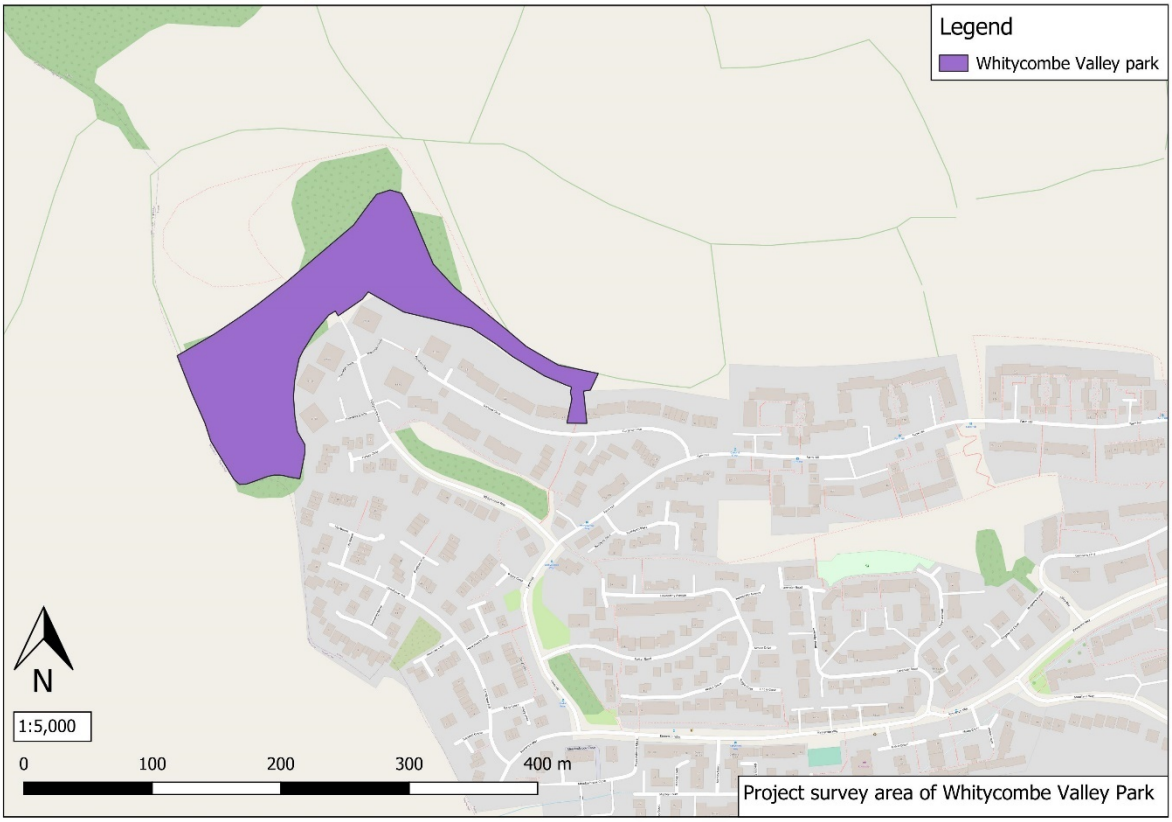

Figure 6.1 Whitycombe Valley Park Survey Area

There are several desire lines within the site and many of these unofficial paths are located on the steeply sloping areas of the site. The topography of the site also makes access challenging for people with limited mobility and the site is currently unsuitable for wheelchair, mobility scooter and pushchair users.

6.2 Visitor Numbers & Access Points

No visitor survey data are available for Whitycombe Valley Park, however site visits suggest the site is relatively quiet and is mostly accessed by ramblers and dog

walkers. The location of the site on the edge of a residential area on the outskirts of Exeter means that it is unlikely that people will discover the park unless they live in the vicinity. Although the site is surrounded by open countryside, there are no public footpaths or cycle routes in the area that could connect the site to the wider landscape.

6.2.1 Access Points

There are two access points into Whitycombe Valley Park. One of these is located at the northern extent of the Whitycombe Way cul-de-sac and the other is located off Garland Close. Neither of these access points are wheelchair, pushchair and mobility scooter friendly and the access point off Garland Close requires access up a set of steps.

6.3 Site Usage

6.3.1 Dog Walking

Site visits have confirmed that Whitycombe Valley Park is used by dog walkers. Dogs can roam freely off the lead in winter, but restrictions apply during summer, when they must be kept under close control/on a lead due to cattle grazing and the presence of ground nesting of birds.

6.3.2 Informal Sport/Recreation

There are no informal sport/recreation areas within Whitycombe Valley Park.

6.3.3 Nature Rich Areas

Whitycombe Valley Park supports a mixture of grassland, scrub and broad-leaved woodland habitats. The meadow habitats are described as pristine and wildlife-rich on the DWT website.

6.3.4 Other Uses

In the absence of visitor surveys or detailed site visits, anecdotal evidence and internet searches show that walking and dog-walking are the main uses of the site, with the views over Exeter providing an attraction for visitors.

6.4 Infrastructure

6.4.1 Car Parking

There are no official car parks at or close to Whitycombe Valley Park. Parking is limited to the surrounding residential areas.

6.4.2 Toilet Facilities

There are currently no public access toilet facilities within or in the vicinity of Whitycombe Valley Park.

6.4.3 Cafés & Food Establishments

There are currently no cafes or food establishments within or close to Whitycombe Valley Park, with the Costcutter convenience store on Kinnerton Way the nearest option for purchasing refreshments.

6.4.4 Access

There are two access points into Whitycombe Valley Park. One of these is located at the northern extent of the Whitycombe Way cul-de-sac and the other is located off Garland Close. Within the park itself, the paths consist of unsurfaced desire lines and are very steep in places. Paths may be muddy and can become very slippery in periods of wet weather. There are flat sections of path along the tops of the slopes, however the topography of the majority of the site and nature of the existing paths means that these areas can be hard to access. The access routes through the park are presented in Figure 6.2

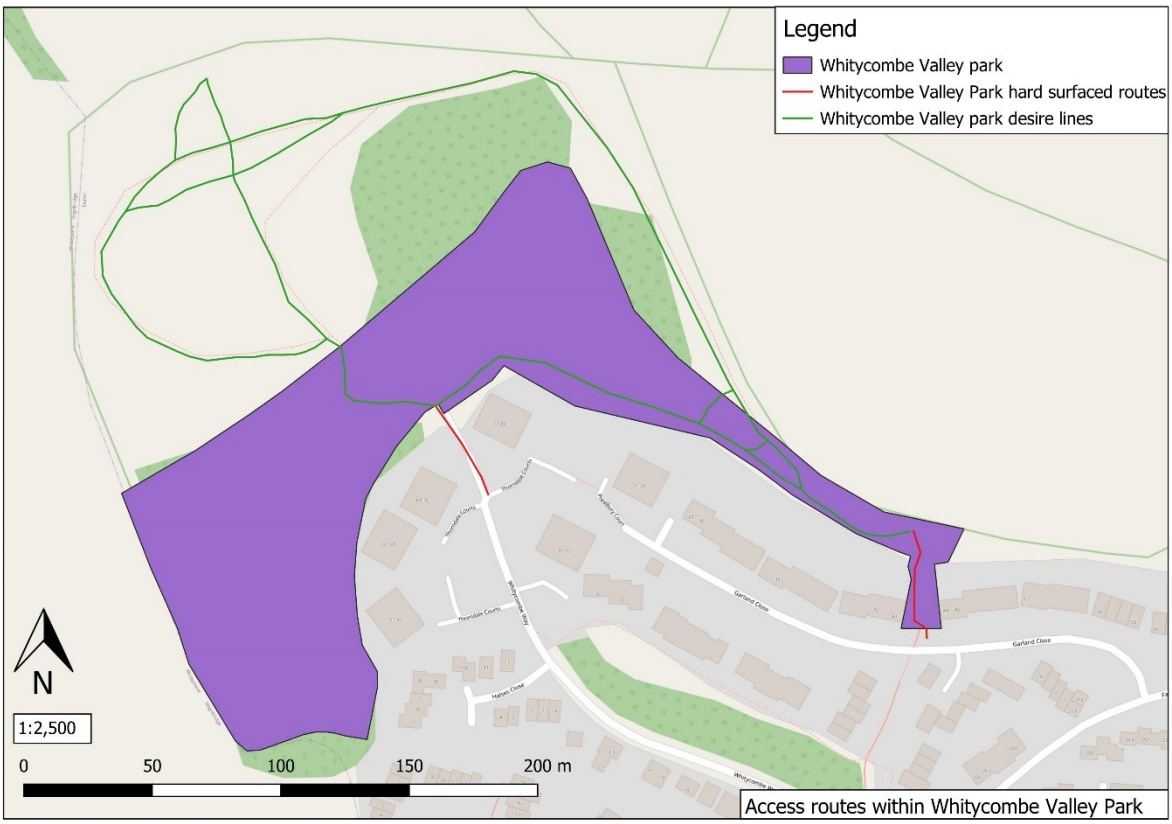

Figure 6.2 Access Routes within Whitycombe Valley Park

6.5 Proximity to Future Local Plan Allocations

Whitycombe Valley Park is located approximately 1.4km west of the proposed development allocation at Red Cow/St David's, where up to 430 new high-density homes are proposed over the next 20 years. Given the small size of the Valley Park and its distance from the proposed allocation, it is unlikely to be regularly visited by

the majority of new residents, particularly when there are other, larger accessible green spaces closer to the proposed allocation. However, the site does have appeal locally as a viewpoint and as a wildlife rich area and footfall could therefore be expected to increase to some degree in the future. The location of the Red Cow/St David's allocation is presented in Figure 6.3.

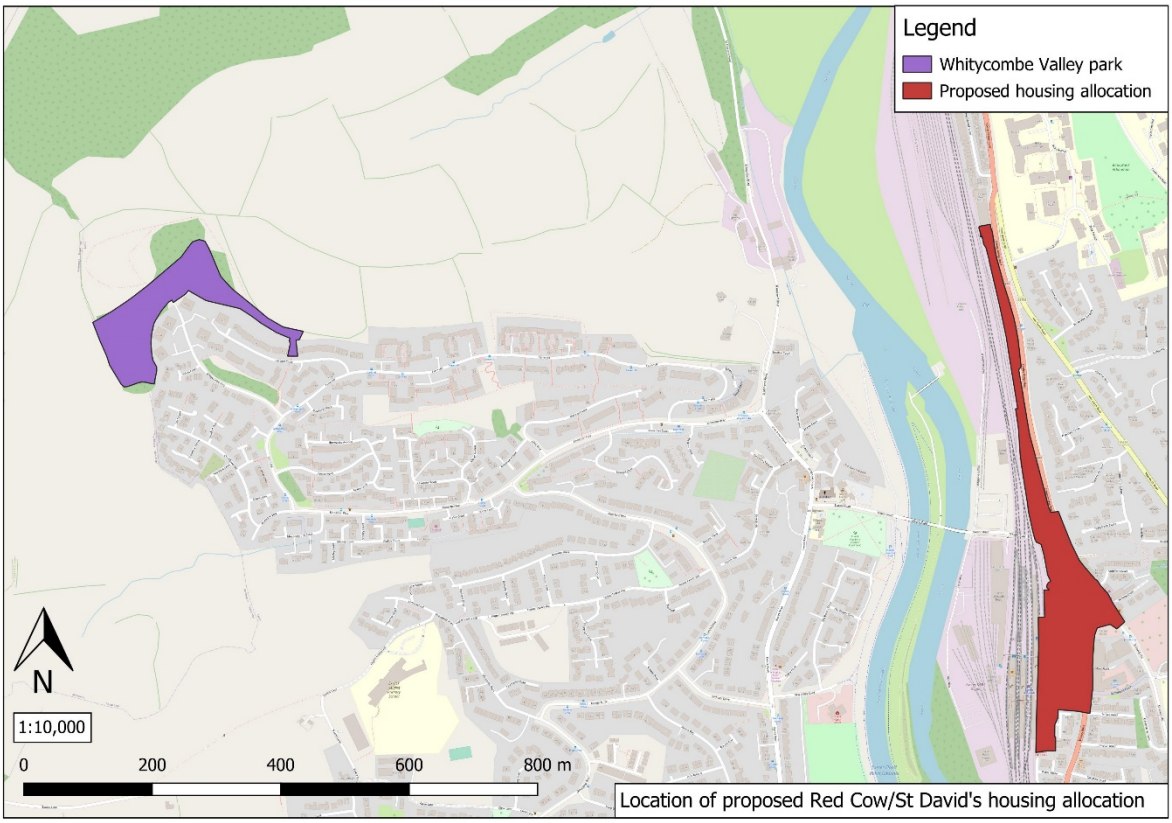

Figure 6.3 Location of Red Cow/St David's Allocation

6.6 Analysis Against SANG Criteria

The analysis of data in Sections 6.2 to 6.4 has allowed for Whitycombe Valley Park to be assessed against the Guidelines for Creation of Suitable Alternative Natural Greenspace (SANG), (Natural England, 2021) to ascertain how many of the essential and desirable criteria the site already meets. The result of this assessment is presented in Table 6.1.

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
	1	Parking on-site	N – there is no official car park.
	2	Circular walk of 2.3-2.5km	N – maximum length of circular walk is 600m.
	3	Car parks easily and safely accessible by car and clearly sign posted	N

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
Essential Criteria	4	Access points appropriate for particular visitor use the SANG is intended to cater for	N – steep/stepped access excludes visitors with mobility issues.
	5	Safe access route on foot from nearest car park and/or footpath	Y – perceived as safe, however the site is grazed by cattle in summer.
	6	Circular walk which starts and finishes at the car parks	N
	7	Perceived as safe– no tree and scrub cover along part of walking routes	Y – perceived as safe.
	8	Paths easily used and well maintained but mostly unsurfaced	N – Paths primarily consist of desire lines paths and are often muddy in periods of wet weather.
	9	Perceived as semi-natural with little intrusion of artificial structures	Y
	10	Range of habitats should be present	Y
	11	Access unrestricted – plenty of space for dogs to exercise freely and safely off the lead	N – Dogs permitted but must be under close control/on lead whilst livestock is present and during ground nesting bird season.
	12	No unpleasant intrusions (e.g. sewage treatment smells etc.)	Y
Desirable Criteria	13	Clearly sign posted or advertised in some way	N
	14	Leaflets/website advertising their location to potential users	Y – DWT website.
	15	Can dog owners take dogs from the car park to the SANG safely off the	N
	16	Gently undulating topography	N
	17	Access points with signage outlining the layout of the SANG and routes available to visitors	N
	18	Naturalistic space with areas of open countryside and dense and scattered trees and shrubs. Provision of open water is desirable	Y
	19	Focal point such as a viewpoint or monument within the SANG	Y – viewpoints at top of slopes, with benches.
	Total: 8/19		

Table 6.1. Whitycombe Valley Park assessed against SANG criteria (Natural England, 2021)

6.6.1 Discussion

Whitycombe Valley Park in its current state passes 5/12 of the essential criteria needed for a site to be considered suitable for SANG provision. It also passes 3/7 of the desirable criteria giving a total score of 8/19, indicating that the park is not performing many of the functions associated with a SANG site.

There is some scope for enhancement measures within Whitycombe Valley Park, which could improve the visitor experience and possibly allow access for additional visitors, who are currently excluded by stepped and steep entrance points and muddy/slippery paths. However, due to the small size of the Valley Park, its location within the city and the general character of the site, it is considered to be unsuitable for SANG provision.

However, the park is still likely to be particularly important accessible greenspace to the local residents within Exwick, which despite its location on the fringes of the city, surrounded by open countryside, has a limited number of publicly accessible greenspaces. Evidence from the Natural England Green Infrastructure mapping (2021) indicates that in some areas of Exwick only 0.11% of the population is located within 200m of a publicly accessible greenspace. Furthermore, the residential areas of Exwick are somewhat isolated from the wider countryside by the absence of connections to the public footpath and bridleway network, which are more prevalent on the northern, eastern and southern fringes of the city.

Given the isolated and disconnected nature of accessible green infrastructure in Exwick, enhancing access into Whitycombe Valley park would improve access for a greater variety of users within Exwick, who generally have sub-optimal access to locally accessible greenspace. However, the enhancements should not aim to drastically increase visitor numbers from wider areas, as this could be to the detriment of the biodiversity of the park.

6.6.2 Possible Enhancements

Whilst the site is not suitable for SANG, the site still has a strategic role in providing publicly accessible natural greenspace for the surrounding communities who have relatively limited access to such sites in their local area. As such, enhancing access into the site may encourage more people to visit the park, rather than travelling to other sites, potentially including more sensitive European sites.

There is likely to be some value in attempting to improve access into the park, to allow its use by residents with mobility issues who are currently excluded from enjoying the site. Given likely local population increase as a result of development proposals at Red Cow/St David's, some improvement to existing access points, measures to ameliorate muddy path surfaces, and the provision of dog bins could support sustainable use of the park into the future.

6.7 Conclusion

Whitycombe Valley Park is valued by local residents as a peaceful location for walking, dog-walking and enjoying impressive views over Exeter. Despite its small size, the site has an open and naturalistic feel with a variety of habitats which are valuable for wildlife. The site and the Exwick area in general, have limited connectivity to other greenspaces and green infrastructure such as footpaths and bridleways, which limits the potential for access by visitors from other parts of the city.

The park is also somewhat isolated and is constrained by its small size, lack of parking and its access points, which are difficult to negotiate for many potential visitors. The potential for enhancement is limited by the location of the site on the fringes of a residential estate, the lack of easy access points, and the steepness of the walking terrain. The combination of these factors results in the site being deemed unsuitable for SANG provision in the future. However, the site still plays a strategic role in offering naturalistic greenspace with far-reaching views on local residents' doorsteps and as such provides some of the functions associated with a SANG site.

There is likely to be some value in attempting to improve existing access and facilities for local residents, especially given that the local population is expected to increase in the future. Such enhancements would need to be delivered as discrete LPA Projects rather than SANG provision, as Whitycombe Valley Park has too many constraints to provide a viable alternative to the nearby European sites.

7 Duryard Valley Park

View over Exeter from Duryard Valley Park (DWT)

Duryard Valley Park

7.1 Introduction

Duryard Valley Park is a former royal deer park located on the northern boundary of Exeter, directly north of the University of Exeter's Streatham Campus. The site has a steeply sloping topography and is renowned for its far-reaching views across the surrounding countryside towards Dartmoor. The designation protecting the park from future development stretches from Clydesdale Road at its southern extent, to Wrefords Lane at its northern extent and encompasses an area approximately 67.83ha in size. However, the geographic scope of this work is focused on the DWT managed area of Belvidere Meadows, which encompasses an area approximately 7.6ha in size. The boundary of the DWT managed area of the park is outlined in Figure 7.1.

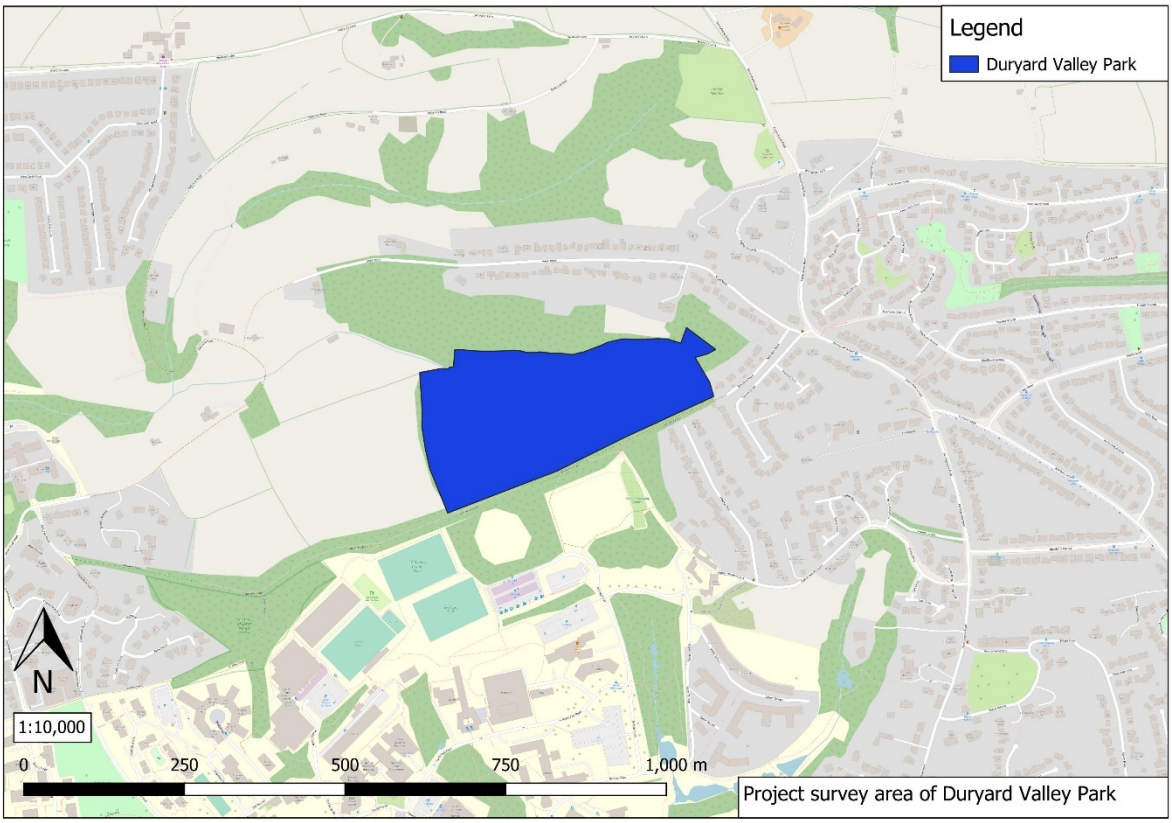

Figure 7.1 DWT Managed Area of Duryard Valley Park

The site includes several desire lines which are likely to be utilised by ramblers and dog walkers. Most paths roughly follow the contour lines, but some routes offer more challenging walks up and down the slopes. The main viewpoint is situated close to an access point from Belvidere Road, which defines the southern site boundary.

Alongside human use, the park is important for biodiversity and a significant percentage of the site is designated as a CWS for its unimproved neutral grassland and mosaic of other habitats. This designation covers 40.5 ha of land with a variety of ownerships, and differing management and habitat quality. The site is also

designated as a Local Nature Reserve (LNR) for its areas of unimproved and semi-improved neutral grassland, hedgerows, scrub and woodland.

The park is set within a semi urban landscape and is bounded by residential developments to the south and east and wider countryside to the north and west. Despite its small size, the park is likely to be an important area of accessible green space for the local community. The site is also adjacent to part of the Exeter Green Circle walking route, meaning that ramblers are likely to access the park whilst walking the route.

7.2 Visitor Numbers & Access Points

7.2.1 Visitor Numbers

At present, there are no visitor survey data available for the Belvidere Meadows area of Duryard Valley Park and therefore visitor numbers are currently unknown. The park does not form part of a public right of way or a busy commuting route and its location on the periphery of the city means it is unlikely that people will discover the park unless they live in the vicinity. However, the proximity of the park to the Exeter Green Circle walking route means that ramblers undertaking this route may occasionally visit the park.

The Exeter Green Circle Monitoring Surveys of July 2021 and July 2022 recorded pedestrian flows to and from a path/road junction very close to one of the Belvidere Meadows access points. The main objective of this work was to evidence the level of pedestrian usage of sections of the Green Circle walking route; as such the data can only offer an indication of pedestrian flows towards and away from the access point to Belvidere Meadows and does not indicate whether pedestrians entered the site itself.

Overall pedestrian flow rates at this survey location were generally above 150 people/day, with a peak rate of 38 people/hour. As a comparison, at Ludwell Valley Park, one of the larger and better-known Valley Parks, overall flow rates were in excess of 300 people/day with a peak rate of 54 people/hour.

However, there is limited value in comparing these data, as the Ludwell survey location was located inside the Valley Park, meaning that pedestrians were recorded within the Park even if they were using it in a transitory capacity. The Belvidere Meadows survey location was located outside the park boundary and only recorded users passing the site entrance, and pedestrians entering and leaving the site were not recorded.

7.2.2 Access Points

The Belvidere Meadows area of Duryard Valley Park has a total of 3 pedestrian access points. All of these access points are located off Belvidere Road, a track which is owned by the Duryard Trust, in common with other private roads and paths within the Duryard Park Estate. In general, these are maintained as unmade roads or

tracks, and as such may not be fully accessible to all potential users. The access points consist of narrow kissing gates limiting accessibility for wheelchairs, pushchairs and people with mobility problems.

7.3 Site Usage

7.3.1 Dog Walking

Site visits confirm that Duryard Valley Park is used by dog walkers. Dog walking is permitted within the Valley Park. However, livestock (cattle) are present within parts of the site during the summer and dog walkers are encouraged to keep their dogs under close control or on leads when passing through areas with livestock. Dog walkers are also encouraged to keep their dogs on leads through the nesting bird season.

7.3.2 Informal Sport/Recreation

There are no informal sport/recreation areas within the DWT managed area of Duryard Valley Park.

7.3.3 Nature Rich Areas

The Belvidere Meadows area of Duryard Valley Park supports a significant diversity of Priority Habitats/Habitats of Principal Importance and this has led to the site being designated as a County Wildlife Site and a Local Nature Reserve. These two designations cover over 90% of the DWT managed area that is the focus of this study.

The park supports a variety of grassland, woodland and hedgerow habitats and species. Priority Habitats on the site include unimproved neutral grassland, purple moor-grass rush pasture and lowland mixed deciduous woodland. These habitats are of significant value to protected species including European protected species.

Two Devon notable species were recorded in the unimproved neutral grassland areas present within the site during surveys carried out by DBRC in 2011. Corky-fruited water-dropwort was recorded in the east of the site, where a steeply sloping field supports species-rich unimproved neutral grassland with scattered shrubs, brambles and damp flushes. Eyebright *Euphrasia nemorosa* was recorded in the west of the site, where a similar grassland habitat grades into species-rich rush pasture.

The same survey also assessed habitat condition, which was recorded as high for the pasture habitats, for which management practices under a Higher-Level Stewardship (HLS) agreement were beneficial. The woodland within the site had low habitat condition due to lack of structural diversity, and lack of protection from damage by livestock and agriculture. A map detailing the location of Priority Habitats is presented in Figure 7.2

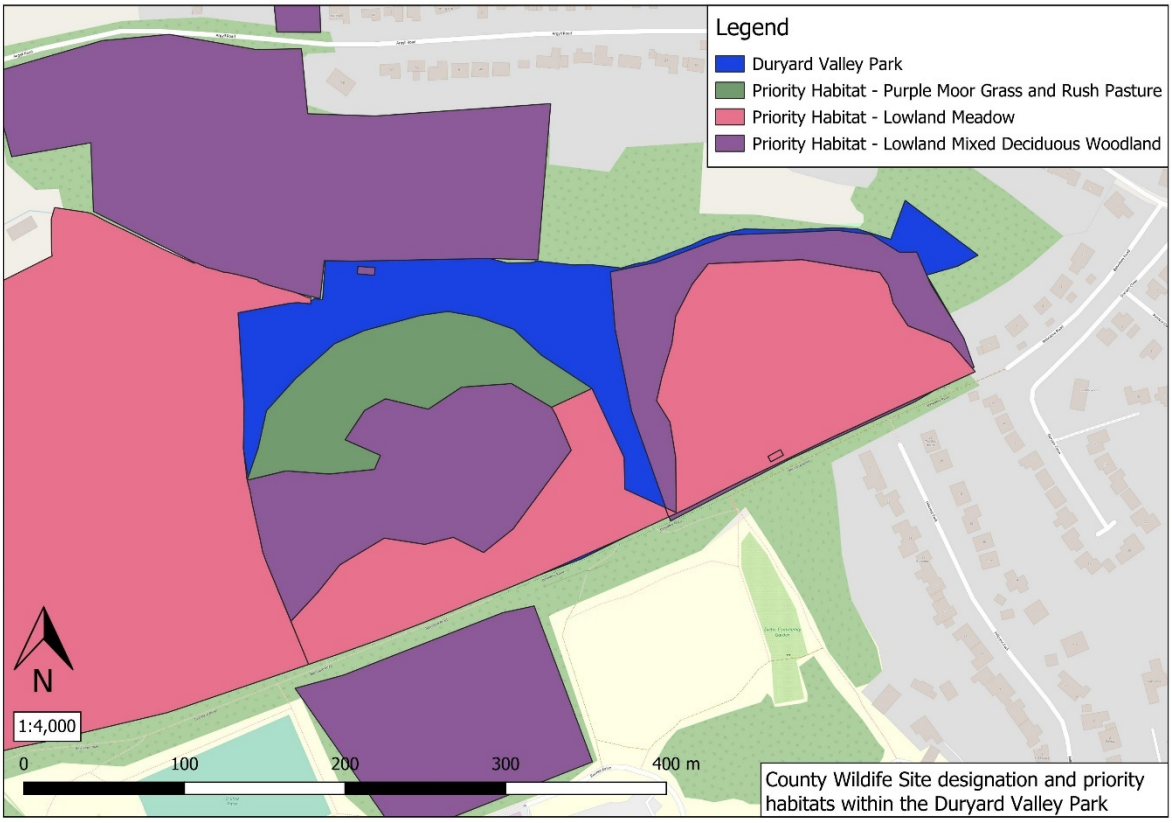

Figure 7.2 Priority Habitats within Duryard Valley Park

7.3.4 Other Uses

In the absence of visitor surveys, site visits and internet searches suggest a range of low-key recreational uses at Belvidere Meadows, including walking, enjoying views and photography of the views and sunsets. The site has also been used for environmental engagement and education purposes, for example butterfly egg hunts and lichen identification courses.

7.4 Infrastructure

7.4.1 Car Parking

There is no official car park for the Belvidere Meadows area of the Duryard Valley Park and parking is limited to informal on-street parking in surrounding residential areas. Anecdotal evidence suggests some site users park their cars at the free car park off Pennsylvania Road close to the access point to Duryard Valley Park, and then walk to Belvidere Road to access Belvidere Meadows. This involves walking along a section of Pennsylvania Road that has no pavements for pedestrians.

7.4.2 Toilet Facilities

There are currently no public access toilet facilities within the DWT managed area of Duryard Valley Park.

7.4.3 Cafes & Food Establishments

There are no places to purchase food or drink within or close to the park. The nearest facilities would be within the University of Exeter's Streatham Campus, which borders the site and can be accessed via a path through Higher Hoopern. Streatham Campus contains numerous cafes and restaurants that are open to the public. Ordnance survey mapping also shows a public picnic site located nearby on Pennsylvania Road, midway between Belvedere Meadows and Lilly Copse.

7.4.4 Access

Belvidere Meadows is bounded to the south by Belvidere Road, a track which is owned by the Duryard Trust. There are three access points into Belvidere Meadows from Belvidere Road on the southern extent of the site.

Within Belvidere Meadows, the walking routes consist of desire lines which predominantly run parallel to Belvidere Road, although there are a limited number of circular routes within the valley bottom in the north of the site. The paths are well-utilised, with steep and muddy sections. These routes are generally unsuitable for wheelchairs, pushchairs and people with mobility issues.

The Exeter Green Circle walking route links the park to The University of Exeter's Streatham Campus in the south, with the route then following the Lower Hoopern Valley before linking to Exeter College and the St David's area. To the north-east, the Green Circle route links Duryard Valley Park with Mincinglake Valley Park.

At the south-western corner of Belvidere Meadows, footpaths link Belvidere Road to the University's sports parks, greenspaces and the wider Streatham Campus.

7.5 Proximity to Future Local Plan Allocations

The emerging Exeter Plan Outline Draft mapped the locations of proposed allocations for mixed use and residential-led development. Duryard Valley Park is not directly adjacent to any of the proposed allocations, but several are in relatively close proximity. The proposed allocation at Red Cow/St David's could accommodate 430 new homes over the next 20 years and is the largest allocation within the vicinity of Duryard Valley Park. However, there are other greenspaces such as Riverside Valley Park and Hoopern Valley Park that are closer and potentially easier to access from this allocation. Smaller allocations at Howell Road (6 new homes) and Exeter Squash Club (40 new homes) border Hoopern Valley Park could also generate new visitors to Duryard Valley Park via the existing Green Circle walking route. The location of the Red Cow/St David's allocation is presented in Figure 7.3.

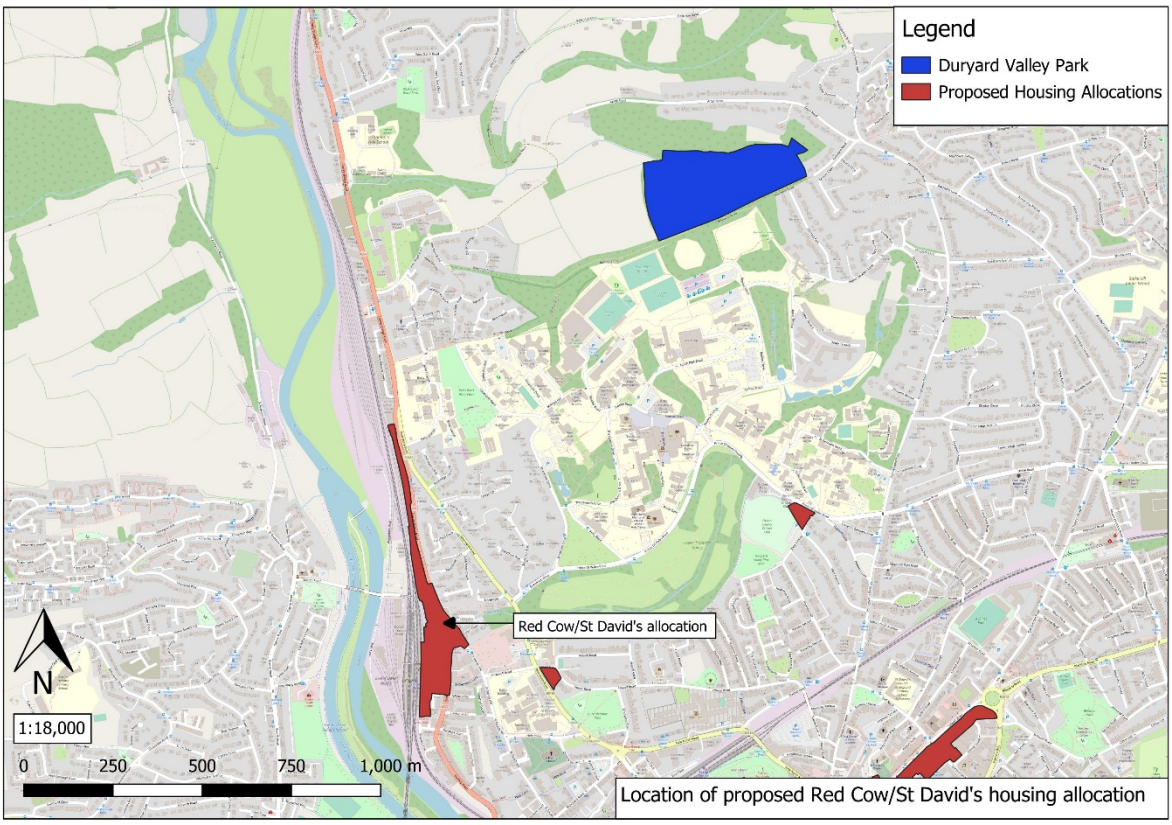

Figure 7.3 Location of nearby housing allocations

7.6 Analysis Against SANG Criteria

The analysis of data in Sections 7.2 and 7.4 has allowed for Duryard Valley Park to be assessed against the Guidelines for Creation of Suitable Alternative Natural Greenspace (SANG), (Natural England, 2021) to ascertain how many of the essential and desirable criteria the site already meets. The result of this assessment is presented below in Table 7.1.

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
	1	Parking on-site	N – pedestrian access only.
	2	Circular walk of 2.3-2.5km	N
	3	Car parks easily and safely accessible by car and clearly sign posted	N
	4	Access points appropriate for particular visitor use the SANG is intended to cater for	N – currently no access points suitable for users with mobility issues.
	5	Safe access route on foot from nearest car park and/or footpath	N

Type of criteria	Ref	Criteria	Meets Criteria Y/N + Comments
Essential Criteria	6	Circular walk which starts and finishes at the car parks	N
	7	Perceived as safe– no tree and scrub cover along part of walking routes	Y - safe, although walking routes are steep in places.
	8	Paths easily used and well maintained but mostly unsurfaced	N – all paths are unsurfaced, but can become muddy and difficult to use in winter.
	9	Perceived as semi-natural with little intrusion of artificial structures	Y
	10	Range of habitats should be present	Y
	11	Access unrestricted – plenty of space for dogs to exercise freely and safely off the lead	N – Dogs permitted but must be under close control/on lead whilst livestock is present.
	12	No unpleasant intrusions (e.g. sewage treatment smells etc.)	Y
Desirable Criteria	13	Clearly sign posted or advertised in some way	N – signs only on access gates.
	14	Leaflets/website advertising their location to potential users	Y – DWT website.
	15	Can dog owners take dogs from the car park to the SANG safely off the	N
	16	Gently undulating topography	N
	17	Access points with signage outlining the layout of the SANG and routes available to visitors	N – no signs showing layout or route options.
	18	Naturalistic space with areas of open countryside and dense and scattered trees and shrubs. Provision of open water is desirable	Y
	19	Focal point such as a viewpoint or monument within the SANG	Y – viewpoint.
	Total: 7/19		

Table 7.1 Duryard Valley Park assessed against SANG criteria (Natural England, 2021)

7.6.1 Discussion

The Belvidere Meadows area of Duryard Valley Park currently passes 4/12 of the essential criteria needed for a site to be considered suitable for SANG provision. It

also passes 3/7 of the desirable criteria giving a total score of 7/19, indicating that the park is not performing many of the functions associated with a SANG Site.

There is scope for some enhancement measures within Belvidere Meadows which could improve the visitor experience within the site as well as draw in additional visitors. However, the small size of Belvidere Meadows, coupled with the steep topography and limited access are serious constraints which make the site unsuitable for SANG provision. In addition, any significant increases in recreational pressure could lead to damage and disturbance to the Priority Habitats present within the park. Current evidence suggests that Belvidere Meadows is valued by local residents for peaceful walking and enjoyment of views, characteristics which may be spoiled by efforts to divert additional recreation pressure towards the site.

7.6.2 Possible Enhancements

Whilst Belvidere Meadows is not suitable for SANG, the site still has a strategic role in providing naturalistic, nature-rich greenspace in close proximity to large residential areas. The site may provide some of the functions associated with a SANG site by allowing people to walk their dogs, access nature and enjoy far reaching views close to their homes, rather than travelling to other greenspaces such as European sites.

There is likely to be value in enhancing the existing facilities for visitors to the park. Proposed housing allocations will likely increase the local population, and thus more people could be encouraged to use Belvidere Meadows in the future. Enhancements could include improving the existing access points to make them suitable for wheelchairs, pushchairs, or other users with mobility issues. Additional signage could provide information on the wildlife value of the site and walking routes and the installation of dog bins could help encourage responsible use of the site by dog-walkers.

Such enhancements could be delivered through LPA projects.

7.7 Conclusion

The Belvidere Meadows area of Duryard Valley Park is located at the northern extent of Exeter and is bounded by residential developments and wider countryside. The park offers far-reaching views across the surrounding landscape and conveys a strong sense of place. The site has an open and naturalistic feel with a variety of habitats, the majority of which are Habitats of Principal Importance. The CWS and LNR designations attest to the quality of the habitats at Belvidere Meadows.

The site is currently utilised for dog walking, rambling and quiet recreation. Any significant increase in visitor numbers could be to the detriment of this peaceful setting, may result in the site feeling overly busy, and could also lead to a decline in the condition of the Priority Habitats and the LNR on site. Therefore, the site is considered unsuitable for SANG. However, the site still has a role as a high-quality local greenspace, which diverts local people away from European sites and encourages the local community to engage with nature-rich greenspaces in close

proximity to their homes. There is therefore value in improving the existing facilities, to improve the experience for current users, making the site accessible to potential users who are currently excluded, and preparing the site for increased footfall from potential local population increase in the future. Enhancements would be delivered through LPA Projects and both visitor numbers and the condition of the site would need to be carefully monitored.

8 Additional Considerations

8.1 Provision of site wardens

Increasing recreational capacity and encouraging more visitors to the Valley Parks is likely to result in additional pressures which need to be addressed. Throughout the summer months, many of the Valley Parks are grazed by cattle as a key part of their management, and with an increase in users there is potential for conflict between visitors and livestock. Of particular consideration are dogs which are not under close control; there are long standing conflicts between livestock and dogs on DWT managed land. The provision of a Site Warden would mitigate these considerations, allowing the recreational capacity to be realised.

Site Wardens are important assets, especially when SANG is being delivered through the enhancement of existing urban greenspace where there may be existing conflicts between users. The role of the warden could be split across all the Valley Parks and would be to encourage visits but also to manage conflict by increasing the compliance of dog walking restrictions where appropriate, to disseminate information on the livestock location and to educate the public on the issues caused by dogs.

As the management body, DWT are responsible for managing the Valley Parks and this includes limiting the issues between wildlife and people within the parks. It is unlikely that the potential capacity of the Valley Parks could be reached without the provision of a site warden to help manage issues and enforce compliance with relevant restrictions.

Deliverability
The employment of a warden across the Valley Parks could be delivered through local projects and would have far reaching benefits; a warden is considered essential to encourage visits and to help minimise future conflicts. Any site warden would be employed by DWT and it is therefore considered that the deliverability of the option is high.

Delivery Timeframe
It is likely that the delivery timeframe for the provision of a Site Warden would be short.

Costs
The estimated cost of providing a Site Warden is summarised in Table 8.1.

Costs

Option	Annual Salary x 30	Total Cost (30 Years)
Warden Provision	£36,209 average cost per year x 30 at 0.5 FTE	**£1,086,275.00**
	Total	**£1,086,275.00**

Table 8.1 Costs

*Costs are estimates based on DWT salary scales and take future rises inflation costs into account. This is based on a full-time role, of which 50% of the role delivery would pertain to mitigation.

Wildlife Impacts
Providing a Site Warden would benefit wildlife and habitats, as one of the responsibilities of the warden would be limiting conflict between users and wildlife/habitats.

Estimated Uplift
As a standalone option, the provision of a Site Warden is unlikely to result in a significant uplift in visitor numbers. However, it is considered that the potential capacity of the Valley Parks cannot be realised without the provision of the site warden.

Adherence to SANG Guidelines
The provision of a Site Warden does not address any essential or desirable criteria within the SANG checklist and no reference is made to it within the wider Natural England SANG Guidelines (2021). However, providing a warden for the Valley Parks is considered essential to help the Valley Parks realise their potential capacity and minimise future conflicts that may arise from this uplift in capacity. Therefore, this is recommended to be delivered through LPA Projects.

8.2 Advertising Campaign

In order for the Valley Parks to have the best chance of drawing in new and existing residents within Exeter and reducing visits to the European sites, it is recommended that an ongoing and targeted advertising campaign is undertaken. The aim of this would be to raise awareness of the Valley Parks, particularly for new residents in Exeter who may be unaware of their existence. This could be delivered through partnership working between DWT and ECC. Leaflets could be delivered to each new home in the city and should detail how to access the Valley Parks, with the provision of a basic location map.

Much of the online information relating to the Valley Parks is located on DWT's website. The quality of the information is generally good, with a map of walking routes available for many of larger Valley Parks. An additional function could be added to DWT's welcome page for the Valley Parks which could allow users to enter their postcode to determine which Valley Park is closest to their location.

Deliverability
It is considered essential to advertise the presence of the Valley Parks, especially for new residents in Exeter who do have familiarity with the local area. It is considered the deliverability of the option is high. This could be delivered through the Habitat Mitigation Strategy as LPA Projects.

Delivery Timeframe
It is likely that the delivery timeframe for the campaign would be short, following the acquisition of funds to facilitate it.

Costs
The estimated cost of providing an advertising campaign is summarised in Table 8.2

Option	Cost
Advertising Campaign	£20,000.00
	Total: £20,000.00

Table 8.2 Costs

*Costs are estimates advised by DWT and ECC Communications Teams and take recent rises inflation costs into account.

Wildlife Impacts
Undertaking an advertising campaign will not have any direct impacts on wildlife. However, the resulting increase in footfall could lead to increased disturbance within the Valley Parks in the future.

Estimated Uplift
Undertaking an advertising campaign is likely to result in an uplift in visitor numbers in the Valley Parks in the future.

Adherence to SANG Guidelines
Undertaking an advertising campaign does not address any essential or desirable criteria within SANG checklist and no reference is made to it within the wider Natural England SANG Guidelines (2021). However, it is considered essential to help raise awareness of the Valley Parks and encourage new and existing residents to utilise them in the future. Therefore, this is recommended to be delivered through as an LPA Project through the updated Mitigation Strategy.

9 Summary of Options and Conclusions

9.1 Riverside Valley Park

Riverside Valley Park south is clearly well used and highly valued by the residents of Exeter. The site has an open and naturalistic feel and has a substantial variety of habitats, some of which are Priority Habitats. Visitor surveys have indicated that the site is used for a variety of purposes including dog walking, walking and cycling. These surveys also revealed that usage of the site is already at a very high level.

However, Riverside Valley Park can play a key strategic role in diverting new and existing residents in Exeter away from European sites and the park is already providing many of the functions associated with a SANG site. This is partly due to its proximity to the city centre, which is likely to encourage local people to visit the site rather than travelling to the European sites. Consequently, there will be significant value in enhancing the Valley Park to continue to encourage future and existing residents to undertake their daily activities locally within the Valley Park, rather than in the European sites. This could be delivered through LPA projects tailored to fit with local needs for access.

9.2 Ludwell Valley Park

The assessment of the baseline of Ludwell Valley Park has indicated that the park has approximately 25.81ha available for SANG and has capacity to provide SANG mitigation for an approximately 3,226 new residents. It is considered that the combination of the options summarised in Table 3.20 will provide uplift and increase the capacity of the site sufficiently to accommodate these additional visitors.

9.3 Mincinglake Valley Park

The assessment of the baseline of Mincinglake Valley Park has indicated that the park has approximately 13.38ha available for SANG and has capacity to provide SANG mitigation for an approximately 1,672 residents. It is considered that the combination of the options summarised in Table 4.17 will provide uplift and increase the capacity of the site sufficiently to accommodate additional visitors.

9.4 Northbrook Valley Park

The assessment of the baseline of Northbrook Valley Park has indicated that the park has approximately 5.38ha available for SANG and has capacity to provide SANG mitigation for an approximately 672 new residents. It is considered that the combination of the options summarised in Table 5.13 will provide uplift and increase the capacity of the site sufficiently to accommodate additional visitors.

9.5 Whitycombe Valley Park

The assessment of the baseline of Whitycombe Valley Park has indicated that the park is somewhat isolated and is constrained by its small size, lack of parking and its

access points, which are difficult to negotiate for many potential visitors. The potential for enhancement is limited by the location of the site on the fringes of a residential estate, the lack of easy access points and the steepness of the walking terrain. The combination of these factors results in the site being deemed unsuitable for SANG provision in the future. However, the site still plays a strategic role in offering naturalistic greenspace with far-reaching views on local residents' doorsteps and as such provides some of the functions associated with a SANG site.

There is likely to be some value in attempting to improve existing access and facilities for local residents, especially given that the local population is expected to increase in the future. These enhancements can be delivered through LPA Projects and not through SANG provision, as Whitycombe Valley Park has too many constraints to provide a viable alternative to the nearby European sites.

9.6 Duryard Valley Park

The Belvidere Meadows area of Duryard Valley Park is located at the northern extent of Exeter and is bound by residential developments and wider countryside. The park offers far-reaching views across the surrounding landscape and conveys a strong sense of place. The site has an open and naturalistic feel with a variety of habitats, most of which are Habitats of Principal Importance. The CWS and LNR designations attest to the quality of the habitats at Belvidere Meadows.

The site is utilised for dog walking, rambling and quiet recreation. Any enhancements with the aim of significantly increasing visitor numbers could be to the detriment of this peaceful setting and may result in the site feeling overly busy. Increased visitor numbers could also lead to a decline in the condition of the Priority Habitats on site. However, the site still has a strategic role as a high-quality local greenspace, in diverting people away from European sites and encouraging the local community to engage with nature-rich greenspaces in close proximity to their homes.

There is likely to be value in improving the existing facilities, to improve the experience for current users, making the site accessible to potential users who are currently excluded, and preparing the site for increased footfall from potential local population increase in the future. However, enhancements will have to be delivered through LPA Projects and not through SANG provision, as the Belvidere Meadows area of Duryard Valley Park is considered unsuitable for SANG. This is primarily due to the potential for damage to priority habitats and wildlife through increased footfall, but also due to the site's small size and isolated location on the periphery of the city.

9.7 Overall Conclusions

The potential of the Valley Parks within Exeter to provide SANG and divert people away from the European sites has long been recognised. This assessment has required extensive evaluation of the DWT managed areas of the Valley Parks to provide SANG with reference to Natural England's SANG Guidelines (2021) for the

creation of SANG. This has involved the collation, analysis, auditing and discussion of information from multiple data sources.

Following the evaluation of the potential of each of the Valley Parks to provide SANG, it has been concluded that there are approximately 44.57ha of land available for SANG use within the DWT managed areas of the Valley Parks. The Natural England guidance specifies that 8ha of SANG should be provided per 1,000 residents for new SANG sites. If this principle is applied, the DWT managed area of the Exeter Valley Parks could provide SANG mitigation for approximately 5,570 new residents.

It is clear that the Valley Parks will play a key role in mitigating for at least some of the increased recreational pressure on European sites, which will occur as a result of the development of 14,300 new homes in the city. A multitude of recommendations have been made to enhance the Valley Parks and draw in additional visitors. A summary of these options with predicted cost, delivery timeframe, deliverability, estimated uplift and adherence to SANG guidelines is provided in Table 9.1.

Remaining mitigation need can be delivered through LPA projects as defined in the forthcoming update to the Mitigation Strategy, comprising discrete, scattered projects such as improved footpath infrastructure. It is recognised that such projects would be appropriate in the urban areas of Exeter where the recreational behaviour of urban residents may differ to those outside the city and there are limited opportunities to create large new greenspace.

Valley Park Location	Option	Creation Cost	Maintenance Costs (30 Years)	Uplift Provided (Y/N)	Delivery Timeframe (Long, Moderate, Short)	Deliverability (Low, Moderate, High)	Adherence to SANG Guidelines (Y/N)	Implemented (Y/N)
Ludwell Valley Park	**Option 1 – Off-site car park on adjacent land**	£400,000.00	£23,760.00	Y	Moderate – Long	Low	Y – Addresses Criteria 1 on SANG Checklist	N
	Option 1(a) – Provide car park at Northbrook	£20,000.00	£23,760.00	Y	Short	High	Y – Addresses Criteria 1 on SANG Checklist	Y
	Option 2 – Footpath creation and improvements	£160,600.00	£17,191.00	Y	Short	High	Y – Addresses criteria 2, 7 and 8 in SANG Checklist	Y
	Option 3 – Improved cycling provision	£7,500.00	£57,090.00	Y	Short	High	N – Does not address SANG criteria	Y
	Option 4 – Wild Play provision	£8,000.00	£20,933.00	Y	Short	High	N – Does not address SANG criteria	Y
								Sub Total: £738,290.00
Mincinglake Valley Park	**Option 1 – Car park expansion**	£20,000.00	£23,760.00	Y	Moderate	Moderate	Y – Addresses Criteria 1 on SANG Checklist	Y
	Option 2 – Footpath enhancements	£41,287.00	£19,601.00	Y	Short	High	Y – Addresses Criteria 7 & 8 on SANG Checklist	Y
	Option 3 – Improved cycling provision	£7,500.00	£57,090.00	Y	Short	Moderate	Y – Addresses Criteria 2, 7 and 8 in SANG Checklist	Y
	Option 4 – Providing toilet facilities	£35,000.00	£47,550.00	Y	Moderate	Moderate	N – Does not address SANG criteria but would	Y

Valley Park Location	Option	Creation Cost	Maintenance Costs (30 Years)	Uplift Provided (Y/N)	Delivery Timeframe (Long, Moderate, Short)	Deliverability (Low, Moderate, High)	Adherence to SANG Guidelines (Y/N)	Implemented (Y/N)
							provide uplift in visitor numbers.	
								Sub Total: £251.841.00
Northbrook Valley Park	**Option 1 – Car parking**	£20,000.00	£23,760.00	Y	Short	High	Y – Addresses Criteria 1 on SANG Checklist	Y
	Option 2 – Footpath creation	£15,000.00	£19,601.00	Y	Short	High	Y – Addresses Criteria 7 & 8 on SANG Checklist	Y
	Option 3 – Visitor centre/learning hub	£80,000 - £165,000.00	£190,290.00 – 237,900.00	Y	Moderate - Long	Moderate	N – Does not address SANG criteria	Y
	Option 4 – Provision of interpretation boards	£6,000.00	£37,496.00	Y	Short	High	Y – Addresses Criteria 17 on SANG checklist	Y
								Sub Total: £188,072.00 – £273,072.00
All Sites	**Provision of Site Warden**	£34,600.00 at 0.5 FTE	**£1,086,275.00**	N	Short	High	N	Y
	Advertising campaign	£20,000.00	N/A	Y	Short	High	N	Y
	Total cost of enhancements to be implemented across all Valley Parks: £2,232,494.00							

Table 9.1 Summary of all options with predicted cost, delivery timeframe, deliverability, estimated uplift and adherence to SANG guidelines

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Appendices

Appendix 1: Methodology

Appendix 1 – Methodology

In order to accurately assess the potential of the Valley Parks to deliver SANG, the project was divided into two stages. The purpose of Stage A was to establish the baseline of the Valley Parks and review existing data to determine whether each Valley Park had the capacity to provide SANG. Following the establishment of the baseline of each Valley Park, the purpose of Stage B was to provide recommendations for enhancements to draw in additional visitors and divert them away from the European sites.

A1.1 Stage A

The purpose of this report is not to collect new primary data, but to draw on information gathered from a variety of secondary data sources and ascertain the potential of the Exeter Valley Parks to provide SANG. This has required the collation of quantitative and qualitative data from several data providers. A full list of data providers is presented below:

- Exeter City Council (ECC)
- Footprint Ecology
- Devon County Council (DCC)
- Devon Wildlife Trust (DWT)
- Devon Biodiversity Records Centre (DBRC)

The collation of data from these providers enabled the baseline of each of the Valley Parks to be determined. Establishing the baseline of each Valley Park involved compiling data on visitor numbers, auditing the quality of infrastructure within the parks and auditing the quality of public rights of way and access routes/points into each Valley Park. Where necessary, this was supplemented by interviews with the DWT Valley Parks Reserves Officer and visits to individual Valley Parks. Collating this data together allowed an estimation of the current SANG capacity of each Valley Park, where data was available.

However, it should be noted that visitor data was not available for all the Valley Parks namely, Northbrook, Duryard and Whitycombe Valley Park. Consequently, these sites were assessed more qualitatively, using anecdotal and empirical evidence provided by DWT.

The biodiversity value of each Valley Park was reviewed and data provided by DBRC enabled the identification of all the Priority Habitats/Habitats of Principal Importance within each Valley Park. This data also provided detail on the protected species utilising each park and where applicable, identified the presence of notable or rare plant species.

A1.2 Stage B

The collation of data in Stage A enabled the baseline of each of the Valley Parks to be established and consequently allowed each site to be assessed against the Natural England SANG Guidelines (2021), to determine the potential of the Valley Parks to provide SANG in the future. Assessing each of the Valley Parks against the Natural England SANG guidelines/checklist provided insight into where the parks were already meeting some SANG criteria and where they failed to meet other criteria.

Using the data provided in Stage A, Stage B was split into two parts. The first part involved producing a series of preliminary recommendations to outline how each Valley Park could be enhanced to meet the SANG criteria and increase visitor numbers. These initial recommendations were guided by the SANG criteria and potential enhancements focused on the criteria that each Valley Park failed to meet. These recommendations were then presented to stakeholders during a stakeholder engagement workshop.

A1.2.1 Stakeholder Engagement

Following the establishment of the baseline for each Valley Park, their assessment against the Natural England SANG guidelines/criteria and the assembly of preliminary recommendations, a stakeholder engagement workshop was undertaken. The purpose of this workshop was to detail the objectives of the project, present the findings of Stage A and outline the initial set of enhancement recommendations. Representatives from the following organisations attended the workshop:

- Devon Biodiversity Records Centre
- Devon County Council
- Devon Loves Dogs
- Devon Wildlife Trust
- East Devon District Council
- Environment Agency
- Exeter City Council
- Natural England
- RSPB

The stakeholder engagement workshop was interactive, with frequent pauses for discussion between delegates. The information drawn out of this meeting helped shape the project, resulting in the refinement of provisional recommendations and the development of new ideas for potential enhancements and ways to approach the project.

A1.2.2 Stage B Approach

Following the stakeholder engagement workshop, the second part of Stage B focused on producing a comprehensive list of potential enhancement measures for each of the Valley Parks. Each of these potential improvements is considered against

a number of criteria. These criteria are deliverability, delivery timeframe, estimated cost, wildlife impacts, estimated uplift and adherence to SANG guidelines. In order to better categorise the potential deliverability and delivery timeframe of each enhancement option, it was necessary for these categories to be assessed by assigning a value of either low, moderate or high and short, moderate or long, respectively. A summary of the approach used to assess deliverability and delivery timeframe is presented in Tables A1.1 and A1.2.

High Deliverability	Moderate Deliverability	Low Deliverability
High chance of delivery, no significant challenges associated with delivering the option.	Moderate chance of delivery, some challenges associated with delivering the option.	Low of chance of delivery, significant challenges associated with delivering the option.

Table A1.1. Summary of approach to assessing deliverability of each enhancement option

Short Delivery Timeframe	Moderate Delivery Timeframe	Long Delivery Timeframe
1-2 year delivery timeframe, following the acquisition of funds to implement option.	3-4 year delivery timeframe, following the acquisition of funds to implement option.	5 years+ delivery timeframe, following the acquisition of funds to implement option.

Table A1.2. Summary of approach to assessing delivery timeframe of each enhancement option

Assessing the potential enhancement options against these criteria enabled the objective evaluation of each option and helped provide insight into which options should be implemented in the future.

During this evaluation it was noted that several of the proposed enhancements (e.g. improved cycling provision) did not relate to or address the essential/desirable criteria within the SANG guidelines. This is despite the options having the potential to increase visitor numbers, improve visitor experience and encourage residents stay local and avoid the nearby European sites. In that respect, the SANG guidelines/checklist are considered somewhat prescriptive, especially in relation to enhancing existing sites/urban greenspaces that are already multi-functional in nature.

It is therefore considered that any enhancement measure with potential to provide uplift and reduce the number of visits to European sites should be fully considered, provided the measure complements the character of the site in question. A similar approach has been adopted by other local authorities attempting to deliver SANG including Epping Forest District Council (2020). Therefore, at sites where SANG criteria cannot be met, options have been set out that would deliver LPA projects to help fill the remaining mitigation need, as detailed in Section 6.10 of the draft South-East Devon European Site Mitigation Strategy.

The cost of potential enhancements recommended for the Valley Parks was also estimated as detailed in A1.2.4. This was achieved through extensive consultations with DWT, who have a significant amount of knowledge and expertise in this area.

A1.2.3 Effectiveness of Improvements

Another key objective of the project is to provide recommendations for improvements to the Valley Parks, in order to draw in additional visitors and divert them away from European Sites.

At present, the existing data and evidence for each of the Valley Parks is not sufficiently detailed to accurately estimate the level of uplift that individual improvements will deliver. Due to the defined scope of the project, it was not possible to undertake detailed evidence gathering. Future evidence gathering will be required to ascertain additional capacity created by the improvements and visitor survey data should show visitor origins postcodes and visitor numbers to justify measures as mitigation (Liley, 2022).

A1.2.4 Estimated Costs

In order to identify an appropriate suite of improvements for each of the Valley Parks suitable for SANG, the cost of each enhancement has been estimated. Due to the scope of the project, bespoke cost estimates are required for a number of the higher cost improvements. Costings include an estimate of the future maintenance costs of these improvements for a period of 30 years and consider future rises in inflation.

Estimating future costs required extensive consultation with both DWT and ECC. DWT have significant experience delivering projects that require similar enhancement/improvement options. Where applicable, costs from similar previous DWT projects were used to guide cost estimates but were altered to reflect recent rises in the cost of raw materials and labour. Of particular use was information gathered for Northbrook Project, where DWT has recently taken on management responsibility and has costed a number of potential improvements to the park. In addition, Valley Park Rangers were also consulted to give insight into future maintenance considerations and how maintenance could be carried out in a way to minimise costs.

In conjunction with the consultation with DWT, the Parks and Green Space Team within ECC provided valuable insight into the cost of enhancement options. Like DWT, the Parks and Green Space Team within ECC have significant experience delivering similar projects and input was vital to producing accurate cost estimates for many of the enhancement options.

The costs outlined within this report are therefore derived from both organisations and every effort has been made to ensure costs are accurate.

A1.2.5 Study Area

The project evaluates the potential of the Valley Parks to provide SANG. However, the scope of the project is focused on the Devon Wildlife Trust-managed areas of the Valley Parks which do not represent the full extent of the area available for public access within the parks. It is therefore possible that there may be areas within the wider Valley Park designations that are also suited for provision of SANG.

A1.3 Project Limitations

There are a number of limitations associated with this project. These are summarised below.

A1.3.1 Data

One of the principal objectives of the project is to collate existing data on site usage and visitor numbers in each of the Valley Parks. The collation of this data would allow an estimation of the current capacity of the Valley Parks and indicate how many hectares of SANG were available for use by additional visitors at each site. It should be noted that the available data were limited as this is the start of a wider project, in which more data will be collected in the future.

Data on visitor numbers and site usage were only available for Riverside, Ludwell and Mincinglake Valley Parks. The absence of data for Whittycombe Way, Duryard and Northbrook Valley Park meant it was not possible to accurately estimate the current capacity of these parks and their visitor numbers are currently unknown.

Where data were available, it was often historic, spanning from 2015 to 2021/22. Furthermore, the data collection points did not cover all of the available access points into the Valley Parks, meaning that the data represent a sample of total visits. Specific data assumptions for each of the Valley Parks are summarised in the relevant sections of text.