

Strategic Environmental Assessment of the Radley Neighbourhood Plan

Environmental Report

September 2017

REVISION SCHEDULE					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
1	Sept 2017	Environmental Report published alongside the 'Pre-submission' version of the Radley Neighbourhood Plan	Mark Fessey Principal Consultant	Steve Smith Technical Director	Steve Smith Technical Director

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INTRODUCTION

1 BACKGROUND

- 1.1.1 AECOM is commissioned to lead on Strategic Environmental Assessment (SEA) in support of the emerging Radley Neighbourhood Plan (RNP).
- 1.1.2 The RNP is being prepared by Radley Parish Council (RPC), following a successful application to have the Parish designated as a Neighbourhood Plan area in 2015. The RNP is being prepared in the context of the Vale of White Horse Local Plan 2031, and specifically will seek to supplement the strategic policies of the Local Plan with detailed policies and proposals to address local place-based issues.
- 1.1.3 SEA is a mechanism for considering and communicating the likely effects of an emerging plan, and alternatives, with a view to avoiding and mitigating negative effects and maximising the positives. SEA of the RNP is a legal requirement.¹

2 SEA EXPLAINED

- 2.1.1 It is a requirement that SEA is undertaken in-line with the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004, which transposed into national law EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA).
- 2.1.2 In-line with the Regulations, a report (known as **the Environmental Report**) must be published for consultation alongside the draft plan that 'identifies, describes and evaluates' the likely significant effects of implementing 'the plan, and reasonable alternatives'.² The report must then be taken into account, alongside consultation responses, when finalising the plan.
- 2.1.3 More specifically, the Report must answer the following **three questions**:
1. What has plan-making / SEA involved **up to this point**?
 - Including in relation to 'reasonable alternatives'.
 2. What are the SEA findings **at this stage**?
 - i.e. in relation to the draft plan.
 3. What happens **next**?

2.1 This Environmental Report³

- 2.1.1 This report is the Environmental Report for the Radley Neighbourhood Plan. It is published alongside the final draft – 'pre-submission' – version of the plan, under Regulation 14 of the Neighbourhood Planning Regulations (2012, as amended).
- 2.1.2 This report essentially answers questions 1 - 3 in turn, in order to provide the required information. Each question is answered within a discrete 'part' of the report.
- 2.1.3 Before answering Question 1, two initial questions are answered in order to further set the scene:
- i) What is the plan trying to achieve?
 - ii) What is the scope of the SEA?

¹ Regulation 15 of the Neighbourhood Planning Regulations (2012, as amended) requires that each Neighbourhood Plan is submitted to the Local Authority alongside either: A) an environmental report; or, B) a statement of reasons why SEA is not required, prepared following a 'screening' process completed in accordance with Regulation 9(1) of the Environmental Assessment of Plans and Programmes Regulations ('the SEA Regulations'). The Radley Neighbourhood Plan was subject to screening in early 2017, including through consultation, at which time it was determined that SEA is required.

² Regulation 12(2) of the Environmental Assessment of Plans and Programmes Regulations 2004.

³ See **Appendix I** for further explanation of the regulatory basis for answering certain questions within the Environmental Report, and a 'checklist' explaining more precisely the regulatory basis for presenting certain information.

3 WHAT IS THE PLAN SEEKING TO ACHIEVE?

3.1 Overview

3.1.1 As discussed above, the RNP is being prepared in the context of the Vale of White Horse Local Plan 2031. The RNP will be in general conformity with the strategic policies of the Local Plan, supplementing these with policies and proposals to address local place-based issues.

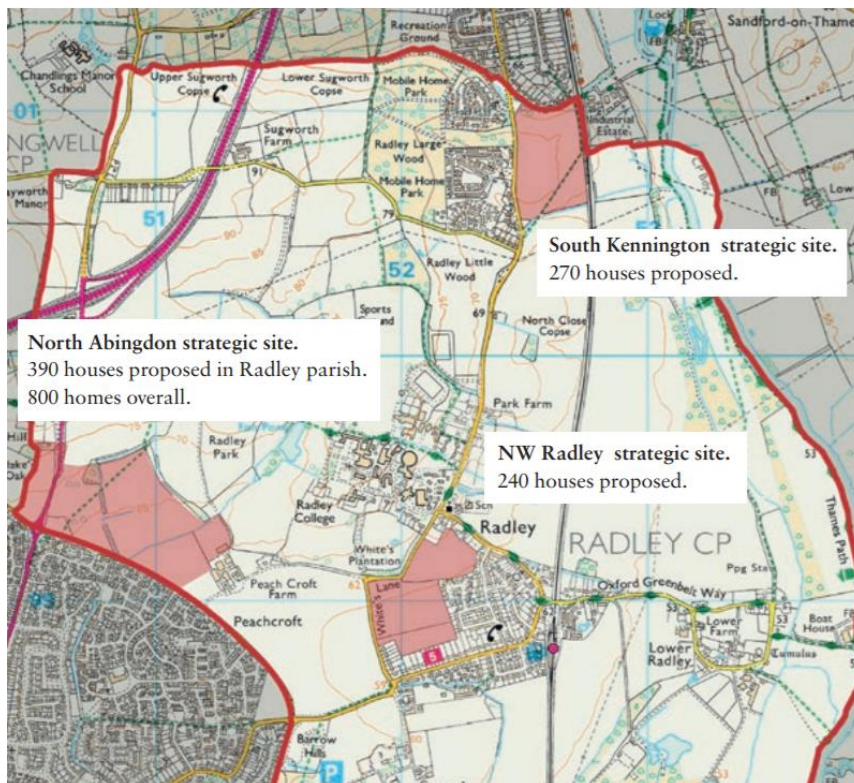
3.2 Vale of White Horse Local Plan 2031

3.2.1 The Vale of White Horse Local Plan 2031: Part 1 (LPP1) was adopted at full council in December 2016, replacing the existing 'Local Plan 2011'. LPP1 sets out Strategic Policies for the district to deliver sustainable development, and establishes a spatial strategy.⁴ LPP1 allocates three strategic sites within Radley Parish, two that fall wholly within the Parish (South Kennington, 270 homes; and North West Radley, 240 homes), and one that falls partly within the Parish (North Abingdon, 800 homes overall, 390 in Radley Parish) – see **Figure 3.1**.

3.2.2 The Vale of White Horse Local Plan 2031: Part 2 (LPP2) will set out policies and locations for housing for the District's proportion of housing needs unable to be met within the boundaries of the city of Oxford. This document will also contain Development Management Policies to complement the strategic policies of LPP1, replacing the relevant saved policies of the Local Plan 2011. Additionally, the LPP2 will potentially allocate additional development sites for housing and other uses in accordance with the broad spatial strategy of LPP1.⁵

3.2.3 Overall, the Local Plan 2031 (inclusive of LPP1 and LPP2) will be used to inform decisions on planning applications across the District, in conjunction with any County-level plans relating to minerals and waste, and any Neighbourhood Plans prepared by local communities.

Figure 3.1: LPP1 allocations in Radley Parish



⁴ See www.whitehorsedc.gov.uk/services-and-advice/planning-and-building/planning-policy/new-local-plan-2031-part-1-strategic-sites

⁵ See www.whitehorsedc.gov.uk/services-and-advice/planning-and-building/planning-policy/local-plan-2031-part-2 A consultation on a draft version of LPP2 ended on 4th May 2017. The draft contained no proposals for additional development in Radley Parish.

3.3 The RNP designated area

- 3.3.1 The RNP area covers all of Radley parish with the exception of an area of approximately 20 hectares in the west of the parish. This area is adjacent to the town of Abingdon and is allocated for housing development under the Vale of White Horse LPP1 – see **Figure 3.2**.

Figure 3.2: Radley Parish (red) and the RNP area (green)



3.4 Vision for the RNP

- 3.4.1 The following vision has been established -

“Radley is a flourishing and attractive place in a peaceful rural setting with many long-established residents, various overlapping clubs and networks and a strong sense of community. It faces largescale expansion over the period of the Neighbourhood Plan as described in section 1.4 and Map 2. Looking forward, RPC wants to retain the things residents value about the way Radley is now while benefiting from the advantages that newcomers and a bigger population can offer. In particular, we want to ensure that new development does not destroy the green space around us and our strong community networks. At the same time, we look forward to the arrival of new people to add vitality and diversity to the community, and to the opportunity offered to improve and expand our social, community and physical infrastructure – our schools, health services, roads, cycleways, sewerage systems, community facilities, natural habitats, recreational opportunities and more.”

- 3.4.2 In order to achieve this vision, the plan will establish policy to achieve the following objectives -
- (i) respect the physical character of the existing settlement and its rural setting;
 - (ii) provide a mix of new housing that meets needs within our community and beyond;
 - (iii) secure the provision of infrastructure which is sufficient to support the needs of existing and new residents, in particular, roads and junctions, sewerage systems, primary health care services, primary school facilities, cycle and walking routes and station access and parking;
 - (iv) supports the health and well-being of Radley residents through the provision of:
 - improved community facilities which promote social interaction and decrease isolation;
 - good connectivity between the new developments and existing settlements to provide for an integrated supportive community sharing parish-based services and facilities;
 - opportunities for people of all ages to be more active;
 - housing types and locally accessible amenities and services which enable older people to be independent for longer.
 - (v) conserves, restores and enhances biodiversity and green spaces, especially in the Radley Lakes Conservation Target Area.
 - (vi) encourages sustainable patterns of travel and minimises pollution.

3.5 What is the RNP not seeking to achieve?

- 3.5.1 It is important to emphasise that the plan will be relatively high level, in that it will establish policy that will then subsequently be applied as part of the development management process, when determining planning applications. As such, neighbourhood plan-making should be considered a relatively strategic undertaking, i.e. a process that omits consideration of some detailed issues. The strategic nature of the plan is reflected in the scope of the SEA.



View of Thrupp Lake, Radley Parish

4 WHAT IS THE SCOPE OF THE SEA?

4.1 Introduction

4.1.1 The aim here is to introduce the reader to the scope of the SEA, i.e. the issues / objectives that should be a focus of, and provide a broad methodological framework for, SEA.

N.B. further information on the scope of the SEA is presented in **Appendix II**.

Consultation on the scope

4.1.2 The Regulations require that “*When deciding on the scope and level of detail of the information that must be included in the Environmental Report [i.e. the SEA scope], the responsible authority shall consult the consultation bodies*”. In England, the consultation bodies are the Environment Agency, Historic England and Natural England.⁶ As such, these authorities were consulted on the SEA scope in early 2017.⁷

4.2 Key issues / objectives

4.2.1 Table 4.1 presents the key topics / issues / objectives that define the SEA scope and provide a methodological ‘framework’ for SEA.

Table 4.1: The SEA framework

Objectives
Maintain air quality and where necessary address any air pollution hotspots.
Protect and enhance all biodiversity and geological features.
Reduce the level of contribution to climate change made by activities within the area
Support the resilience of the area to the potential effects of climate change, including flooding
Protect, maintain and enhance the cultural heritage resource within the Neighbourhood Plan area, including the historic environment and archaeological assets.
Protect and enhance the character and quality of landscapes and townscapes.
Ensure the efficient and effective use of land .
Promote sustainable waste management , encouraging the reduction, re-use and recycling of waste.
Use and manage water resources in a sustainable manner.
Cater for existing and future residents’ needs as well as the needs of different groups in the community, and improve access to local, high-quality community services and facilities .
Reduce deprivation and promote a more inclusive and self-contained community.
Provide everyone with the opportunity to live in good quality, affordable housing , and ensure an appropriate mix of dwelling sizes, types and tenures.
Improve the health and wellbeing residents within the Neighbourhood Plan area.
Promote sustainable transport use and reduce the need to travel.

⁶ In-line with Article 6(3) of the SEA Directive, these consultation bodies were selected because ‘by reason of their specific environmental responsibilities, [they] are likely to be concerned by the environmental effects of implementing plans and programmes.’

⁷ The SEA Scoping Report published for consultation in 2017 is available at: radleyvillage.org.uk/radleys-future/the-neighbourhood-plan/

PART 1: WHAT HAS PLAN-MAKING / SEA INVOLVED UP TO THIS POINT?

5 INTRODUCTION (TO PART 1)

- 5.1.1 Preparation of RNP began in 2015, with a number of plan-making steps having been undertaken since that time, including consultation on a draft plan in 2016.
- 5.1.2 The aim here is not to recount in detail the entire ‘story’ of plan-making to date, but rather to explain how work was undertaken to develop and then appraise **reasonable alternatives** in 2017, ahead of finalising the revised draft plan for consultation.⁸
- 5.1.3 More specifically still, this part of the report presents information regarding the consideration of reasonable alternative policy approaches to the **Radley Lakes area**, in the south of the plan area - see **Figures 5.1**. Planning for the Radley Lakes area is of central importance to the achievement of RNP objectives (iv) and (v), as discussed further below.⁹

What about other plan issues?

- 5.1.4 Whilst the plan will set policy to address a range of other thematic issues through development management policy, these policy areas have not been a focus of alternatives appraisal, and hence are not discussed further here, within Part 1 of the report (but are a focus of Part 2).

Structure of this part of the report

- 5.1.5 This part of the report is structured as follows:

Chapter 6 - explains the process of **establishing** the reasonable alternatives

Chapter 7 - presents the outcomes of **appraising** the reasonable alternatives

Chapter 8 - explains reasons for **establishing** the preferred option, in light of the appraisal.

⁸ There is a requirement for the Environmental Report to present an appraisal of ‘reasonable alternatives’ and ‘an outline of the reasons for selecting the alternatives dealt with’. The aim is to inform the consultation, and subsequent plan finalisation.

⁹ Presenting information on reasonable alternatives, within the Environmental Report, is a regulatory requirement. Specifically, the Regulations require that, when determining what should be a focus of alternatives appraisal, account is taken of ‘the plan objectives’. Recent case-law (most notably Friends of the Earth Vs. Welsh Ministers, 2015) has established that planning authorities may apply discretion and planning judgement when determining what should reasonably be the focus of alternatives appraisal.

Figure 5.1: The Radley Lakes area



N.B. The Radley Lakes area is located to the south of Radley, west of the railway, north of the River Thames and east of White Horse Leisure Centre / the Abingdon urban edge. This satellite image is out-of-date, in that it suggests a road link from the southwest to the commercial area west of Thrupp Lake. In fact, this route is now closed, meaning that access to the commercial/industrial area is from the north (Thrupp Lane).

6 ESTABLISHING THE REASONABLE ALTERNATIVES

6.1 Introduction

6.1.1 The aim here is to discuss the key steps taken in 2017 that led to the development of 'reasonable' policy alternatives for the Radley Lakes area. Ultimately, the aim is to present 'reasons for selecting the alternatives dealt with', in accordance with the SEA Regulations.¹⁰

6.1.2 Specifically, there is a need to: 1) introduce the Radley Lakes area; 2) discuss issues and opportunities; and then 3) explain how understanding in relation to (1) and (2) was drawn together to establish reasonable alternatives for appraisal and consultation.

6.2 Introducing the Radley Lakes area

6.2.1 The Radley Lakes area comprises the southern part of the parish. The area is quite complex, due to past, present and future minerals extraction (sand and gravel) and related operations.

Minerals planning permissions

6.2.2 The first point to understand is that the entire area, along with land to the east of the railway line (i.e. outside of the Radley Lakes area), has been subject to minerals extraction planning permissions over the past c.70 years, and the majority of the area continues to be covered by an extant permission. Minerals extraction occurred in a number of areas, over a c.50 year period (little or no minerals have been extracted in the past 25 years). The situation is complex; however, in broad terms, the following is a timeline of key events –

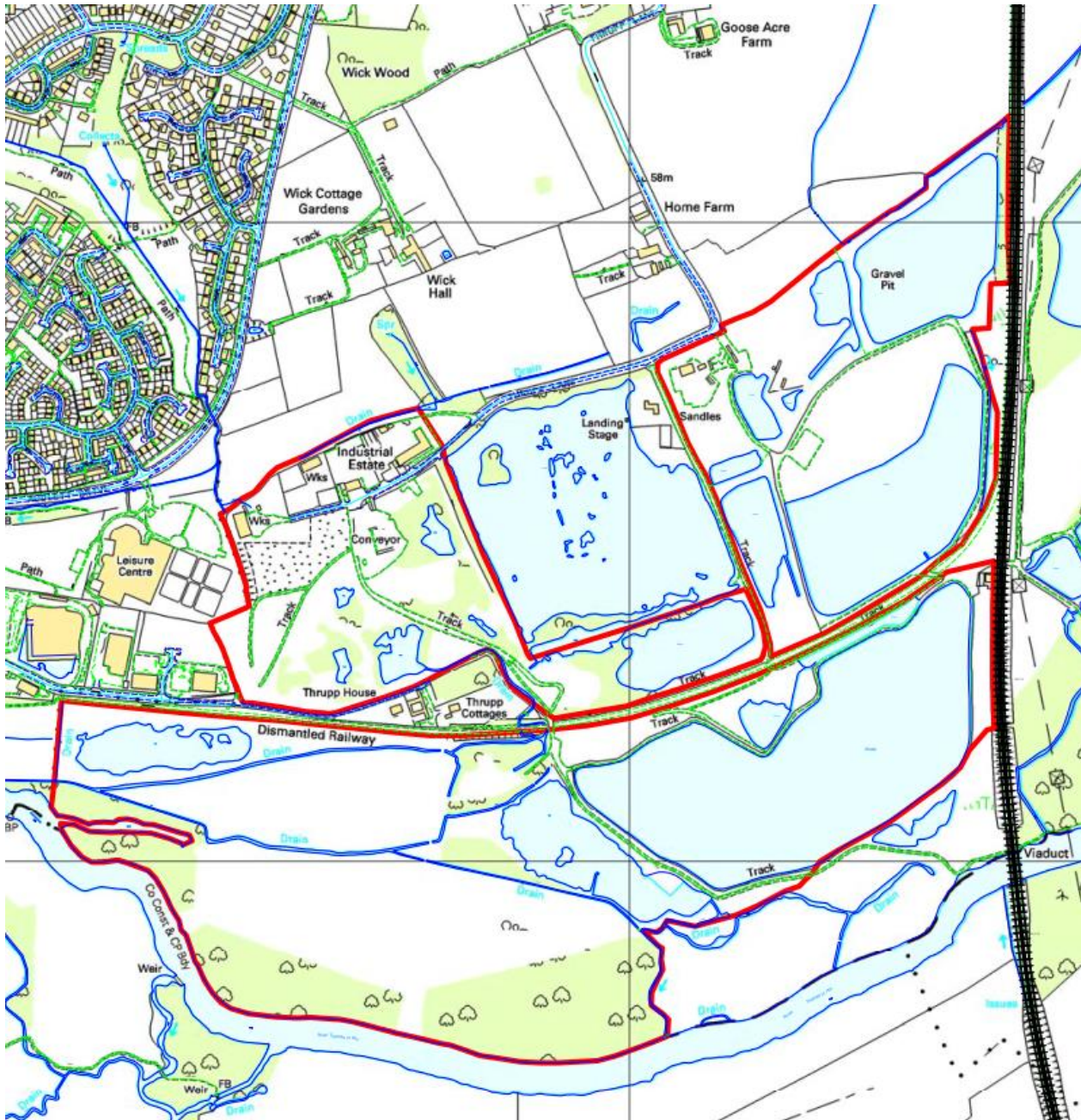
- Land to the east of the railway line (outside of the Radley Lakes area) was an **early focus** of extraction and restoration, with the land backfilled with pulverized fuel ash (PFA) from Didcot power station and restored to agricultural use, in accordance with the established 'condition' of the planning permission.
- Worked out quarries to the west of the railway line (within the Radley Lakes area) were also due to be restored to agriculture; however, the situation changed in **2008**. Specifically, proposals to backfill Thrupp Lake (i.e. a lake that had formed in a former quarry) with PFA were subject to significant opposition, on grounds related both to nature conservation and amenity / public enjoyment, and eventually the decision was made instead to retain the Lake as open water and to manage it for nature conservation and public access. Thrupp Lake has now been fully restored to its end use, i.e. is no longer subject to a minerals extraction related planning permission.
- **Subsequently**, following the decision to change the end use of Thrupp Lake, the decision was taken to also change the planning condition attached to several other former quarries that had been back-filled with PFA but not yet restored. Specifically, it was determined that restoration should be to achieve a nature conservation end use, rather than an agricultural end use.

6.2.3 **Figure 6.1** shows the latest situation, with the majority of the area covered by a minerals planning permission, with the exception of Thrupp Lake and land at the southeast extent.

6.2.4 It is also important to note here that the area is currently the subject of a Review of Old Minerals Planning Permissions (**ROMP**). The Environment Act 1995 introduced a requirement on Mineral Planning Authorities (MPA) to undertake a program of 'Initial Review' of all mineral planning permissions granted between 30 June 1948 and 22 February 1982, and, thereafter, to operate a program of 'Periodic Review' of mineral planning permissions more than 15 years old. The legislation guidance was amended in 2013 to give MPAs greater flexibility to ensure that conditions attached to mineral planning permissions remain up-to-date and relevant. Implications of the ROMP are discussed further below, in Section 6.3.

¹⁰ Schedule II of the Environmental Assessment of Plans and Programmes ('SEA') Regulations 2004

Figure 6.1: The minerals extraction planning permission / ROMP area



N.B. This map is out-of-date in that it shows open water lakes to the east of the Radley Lakes area. In fact, these lakes (former quarries) have now been infilled.

Components of the Radley Lakes area

- 6.2.5 Thrupp Lake is the large water body comprising the northern central part of the area. It is managed for recreation and nature conservation by the Earth Trust, with a popular circular walk having been established. There are existing informal areas for car parking (5 – 10 cars). The Earth Trust have planning permission for a Visitor Centre but their current intention is not to pursue this, but instead to provide a small carpark..
- 6.2.6 Thrupp Lake provides a useful reference point, when describing the Radley Lakes area -
- **Immediately east of Thrupp Lake** - is a concrete batching plant run by H Tuckwell & Sons Ltd. Whilst this site originally processed minerals extracted from the Radley Lakes area, it now batches concrete from feedstock brought in by road by HGV, along Thrupp Lane.
 - **Further east** (beyond the H Tuckwell & Sons Ltd site) **and southeast of Thrupp Lake** - are extensive open areas comprising former quarries back-filled with fuel ash, currently being restored for nature conservation. This land is not publicly accessible, but is known to have an interesting and important ground flora. The restoration process will end in 2020.
 - At the **southeast extent** of the area - is a mature woodland, bordering the river Thames, which is not subject to any minerals planning permissions. This woodland links to other areas of woodland to the west, and elsewhere within the Radley Lakes area.
 - **Southwest of Thrupp Lake** - is a single large dwelling, with associated buildings and a large garden, called Thrupp House; and beyond that an extensive area with extant planning permission for gravel extraction. The house is accessed from the west, along Barton Lane.
 - **West of Thrupp Lake** - is the second concrete batching plan, run by Lafarge Tarmac, and a larger site, run by John Curtis and Sons Ltd, operating a range of commercial uses, such as car repair. As per the H Tuckwell & Sons Ltd site discussed above, both sites are accessed from Thrupp Lane and generate a significant amount of HGV traffic.

Figure 6.2: Part of the J Curtis & Sons Ltd industrial estate



Accessibility by road and public right of way

- 6.2.7 Accessibility to and within the area by road and public right of way is a key matter, and so it is worthwhile clarifying the situation -
- **Thrupp Lane** - runs between Radley Village and the John Curtis and Sons Ltd estate, via the two concrete batching plants (the final section being a private road). The lane is single track, and in very poor condition. As discussed above, it is heavily used by HGV traffic, which creates some conflicts/issues – see Figures 6.3 and 6.4.
 - **National Cycle Route 5** - follows the part of Thrupp Lane that is a public highway, before turning south at the northeast edge of Thrupp Lake, following a path along the eastern side of the lake, and then turning west along a disused railway, before continuing along Barton Lane towards the centre of Abingdon.
 - **Barton Lane** - From the Abingdon Ring Road, it is the means of accessing a science park, including the large 'Sophus' head office. Beyond the science park, the road continues east as a private road, as far as Thrupp House. Historically it was also the means of accessing the minerals extraction area and the John Curtis and Sons Ltd estate from the west.
 - There are also other informal paths and routes, associated with past quarrying.

Figure 6.3: Two lorries and a cyclist on Thrupp Lane



Figure 6.4: Accident on Thrupp Lane



The wider geographical context

6.2.8 The wider context of the area is as follows -

- To the **north** - is an area of attractive agricultural fields and meadows, along with several isolated houses. A large part of this area is designated as a Scheduled Monument, on the basis of archaeology that indicates the site of a former settlement. There is also a derelict former coal yard site, which may be developed for a small number of new homes. There are no footpath links through this area, linking Radley Village with the Radley Lakes area.
- To the **northwest** is Abingdon-on-Thames - a large town set to see considerable housing growth. It is also notable that a local wildlife site follows the route of a stream, within the Abingdon ring road, close to the border with the Radley Lakes area.
- To the **west** - is a science park, accessed from Barton Lane; a leisure centre, accessed from Audlett Drive (Abingdon Ring Road); and Barton Fields, an ecologically important area of wet meadow (outside of Radley Parish), which is actively managed for nature conservation. Further west is Abbey Meadow, and then the historic centre of Abingdon.
- To the **south** - is the Thames Path, and the river itself. There is currently no convenient public means of accessing the Radley Lakes area from the Thames Path.
- To the **east** - is the Oxford-Didcot railway line, and beyond that former quarries, now infilled and restored to agriculture.

6.3 Issues and opportunities

The opportunity for quiet recreation and/or nature conservation

- 6.3.1 A key issue is the need to fully realise the opportunity to increase the value of the area for quiet recreation and/or nature conservation. There is a clear opportunity, given: A) management of Thrupp Lake by the Earth Trust (see earthtrust.org.uk/Places/ThruppLake); B) the nature conservation focused restoration plans of the former quarry sites coming to fruition in 2020; and C) the amount of housing growth planned within Radley Parish, and at other locations nearby. Recreational use of the area could potentially be hindered in the future if the existing planning permissions for minerals extraction at the area's southwestern extent are implemented; however there can be no certainty when implementation would happen, if ever (recognising the ROMP process currently underway).¹¹

Figure 6.4 Thrupp Lake welcome board (N.B. not orientated north/south)



The problem of HGV traffic along Thrupp Lane

- 6.3.2 A related issue is HGV **traffic along Thrupp Lane** – the only means of accessing Radley Lakes from the north, and part of a NCN route - affecting the suitability of the road for use by cyclists and pedestrians. A 2016 survey found the lane to be used by 259 HGVs in one day, in addition to other vehicles - see Table 6.1. Similar surveys have been carried out in the past, also showing a high frequency of HGVs, and recent anecdotal evidence suggests that that the frequency may have increased. Fluctuations in frequency will relate to the demand for concrete locally, and hence it may be fair to suggest the likelihood of a future upward trend, given the scale of planned development locally (e.g. Didcot Garden Town). It could be suggested that HGV movements could decrease in the future as a result of decreased industrial/commercial activity in the area; however, there is no certainty in this respect. There is no permanent planning permission for the operations at the John Curtis and Sons Ltd industrial estate and the site is due to be returned to green field in the longer term; however, the two concrete batching plants, which account for most of the HGVs, have planning permission for continued operations in the long-term.

¹¹ Most recently, in 2017, as part of the ROMP process, the minerals operator failed to respond to Oxfordshire County Council within the designated time period. As such, the minerals operator has been served with a two year suspense notice by OCC. As a consequence it is uncertain whether minerals extraction will be permitted to resume in the area where it has not yet taken place.

Table 6.1: Thrupp Lane traffic count 2016

Category	Southbound	Northbound	Total
Heavy lorries	129	130	259
Small lorries and large vans	59	64	123
Medium and small vans	54	43	97
Cars	110	100	210
Pedal bikes	30	19	49
Runners and walkers	20	16	36

6.4 The reasonable alternatives

6.4.1 In light of the issues/opportunities discussed above, it was determined that there was a need to develop/appraise reasonable alternatives in relation to the issue discussed at para 6.3.1, namely ‘the need to fully realise the opportunity to increase the value of the area for quiet recreation and/or nature conservation’. The following two reasonable alternative policy approaches for the Radley Area were established –

Option 1 - Policy supporting use of Radley Lakes for nature conservation

Option 2 - Policy supporting use of Radley Lakes for nature conservation and quiet recreation

6.4.2 These were determined to be the ‘reasonable alternatives’, in that they related closely to different arms of the Neighbourhood Plan objectives (see para 3.4.2)¹² and hence were subjected to appraisal ahead of the draft plan being finalised for consultation – see Chapter 7.

6.4.3 The following options were deemed ‘unreasonable’ -

- A policy approach supporting quiet recreation, to the exclusion of nature conservation. This is on the basis that extensive areas of land within the Radley Lakes area are in the process of being restored to a nature conservation end use, and almost all the area is a Conservation Target Area.¹³
- A policy approach supporting recreational uses other than those qualifying as ‘quiet’. This is on the basis that certain noisier recreational uses – notably motor sports and water sports – conflict with nature conservation and quiet recreation objectives. This position is thought to have support amongst local residents;¹⁴ however, it is recognised that areas within Radley Lakes are currently used informally for motocross (a form of motorcycle racing held on enclosed off-road circuits).

6.4.4 Finally, there is a need to explain the reasons for not developing / appraising / consulting on reasonable alternatives in relation to the issue/opportunity discussed at para 6.3.2, namely ‘the need to address HGV traffic along Thrupp Lane’ – see **Box 6.1**.

¹² The SEA regulations specify that reasonable alternatives must be established taking into account the ‘objectives and geographical scope’ of the plan.

¹³ Conservation Target Areas are defined by Oxfordshire County Council - see

<https://www.wildoxfordshire.org.uk/biodiversity/conservation-target-areas/>

¹⁴ In the May 2016 consultation there was very strong resident support for a new strategy for the Radley Lakes area to reconcile the various different uses and to maximise its potential for nature conservation and quiet recreation. 78% were in favour, 14% no firm view and 8% against. Those in favour came from all parts of the parish, not just those nearest the Lakes area. Additionally in the December 2016 consultation there was strong support from statutory bodies, nature conservation groups and those landowners who responded.

Box 6.2: Options ('unreasonable') for addressing the Thrupp Lane HGV traffic issue

The Parish Council's long term policy, as an element of the Radley Lakes strategy, is to solve the problem of traffic along Thrupp Lane by creating a new road that allows the three industrial/commercial sites to be accessed from the west. Thrupp Lane could then be closed to traffic (the Thrupp Lake car park would also be accessed from the new western access point), thereby greatly improving its popularity amongst walkers and cyclists, and addressing health/safety concerns.

The Parish Council feels that a new road access from the west is likely to be necessary, as otherwise the problem of HGV traffic along Thrupp Lane will continue, and quite possibly worsen. There is little certainty regarding the likelihood of current temporary planning permissions for commercial activities being ended, recognising that a new temporary planning permission was granted in October 2016, despite opposition from the Parish Council. Furthermore, the Parish Council recognises the economic and employment benefits of supporting industrial and commercial activities in this area.

Initial analysis to explore new road options was undertaken in 2012 by a liaison group comprising the Parish Council, Oxfordshire County Council, landowners and others. Specifically, a shortlist of five options was established, all leading from the JCSL site at the west end of Thrupp Lane towards Audlett Drive. Options 1 and 2 would run south west to Barton Lane, and thence to Audlett Drive; whilst Options 3a,b and c would run direct onto Audlett Drive. All the options have pros and cons, and would be worthy of further consideration, to inform selection of a preferred option.

N.B. Options for a new public right of way (PROW) from Radley Village to Radley Lakes have also been explored, but are not feasible in the foreseeable future, given landownership and other issues.

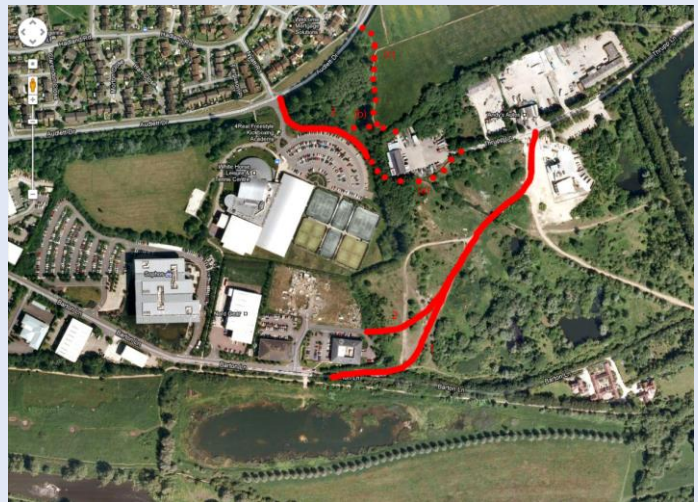


Figure A: Potential new road options

The Parish Council would like to see a new road delivered as soon as achievable; however, it has been determined that it would be inappropriate for the Radley Neighbourhood Plan to establish policy. The PC is not currently in a position to determine the most appropriate route, including because of a lack of engagement on the part of the key land-owner, and the PC also recognises that requiring the construction of a new road is outside the remit of Neighbourhood Plan policy.

At the current time, the proposal is to set out a 'Community Action' within the Neighbourhood Plan, rather than a planning policy, and there is recognition that the Action is unlikely to be delivered quickly. Community Actions within the adopted plan will not have a bearing on planning decisions, and hence can be seen as aspirational. The following Community Action is proposed -

CA.11 Thrupp Lane

The industrial and commercial sites at the foot of Thrupp Lane should be served by a more suitable new road leading westward towards Audlett Drive, enabling the Lane to be safe for walking and cycling. RPC will work with Oxfordshire County Council, the Vale of White Horse District Council and the relevant landowners to realise the creation of this solution, seeking financial contributions from those benefitting from it.

7 APPRAISING REASONABLE ALTERNATIVES

7.1 Introduction

7.1.1 The aim of this chapter is to present appraisal findings in relation to the reasonable alternatives introduced above.

7.2 Summary alternatives appraisal findings

7.2.1 **Table 7.1** presents appraisal findings in relation to the two alternatives introduced above. Within each row (i.e. for each of the topics that comprise the SEA framework) the columns to the right hand side seek to both categorise the performance of each option in terms of 'significant effects' (using **red** / **amber** / **green**) and also rank the alternatives in order of performance. Also, '=' is used to denote instances where the alternatives perform on a par (i.e. it not possible to differentiate between them).

Table 7.1: Alternatives appraisal

Topic	Option 1 - Nature conservation	Option 2 - Nature conservation and quiet recreation	Discussion
Air quality	=	=	<p>There are no known air pollution hotspots in Radley Parish, and it is unlikely that Radley Lakes policy will have implications for the Abingdon Town Centre Air Quality Management Area (AQMA).</p> <p>There is little reason to suggest that increased car movements in the Radley Lakes area will lead to poor air quality.</p> <p>Another consideration is 'point source' pollution from the industrial operations; however, again there is little reason to suggest that increased recreational use in the area will lead to any conflict.</p>
Biodiversity	=	=	<p>Either approach could potentially lead to significant positive effects, on the basis that there would be active management for nature conservation, with 'people and nature' brought together.</p> <p>There is little potential to suggest that 'quiet recreation' uses would conflict with nature conservation objectives. With the Radley Lakes area planned as a whole, there will be good potential to 'compartmentalise' uses, e.g. making areas of lower biodiversity / nature conservation value attractive for use by dog walkers. There will also be good potential to manage access to the more sensitive areas (e.g. areas where there are currently established populations of orchids and other uncommon flora), e.g. with footpaths and information boards.</p>

Topic	Option 1 - Nature conservation	Option 2 - Nature conservation and quiet recreation	Discussion
Climate change	=	=	Radley Lakes policy will have little or no implications for climate change mitigation objectives. Whilst transport/travel implications will in turn have implications for greenhouse gas emissions, this matter is the focus of a stand-alone discussion, below.
Flooding	=	=	A large proportion of the area falls within an established flood risk zone; however, national guidance does not preclude recreational uses within flood risk zones (e.g. the Thames Path is, of course, at risk of flooding). Flood risk could potentially be a constraint to the development of permanent structures within the area; however, there are no plans for any such structures. Whilst the Earth Trust has planning permission for a visitor centre, it is understood that the current intention is not to pursue the scheme (instead using the land for a small car park).
Heritage	2	1	<p>Thrupp House is a listed building, and land to the north of the Radley Lakes area is also constrained in heritage terms.</p> <p>It is not clear that additional car movements, associated with Option 2, would be of a scale where there could be negative implications for heritage assets, and there is also a need to consider the possibility that increased use of the area by local people will increase appreciation of local heritage.</p> <p>Finally, there is a need to consider the possibility that increased recreational use will lead to a situation whereby Abingdon Town Council is minded to promote a circular walk from the historic centre of Abingdon, via Abbey Meadows, to Radley Lakes and back. Such a walk could help to build appreciation of local heritage.</p> <p>In conclusion, Option 2 is better performing, but significant positive effects are not predicted.</p>

Topic	Option 1 - Nature conservation	Option 2 - Nature conservation and quiet recreation	Discussion
Landscape	=	=	<p>The Radley Lakes area itself is not notably sensitive in landscape terms, recognising that much of the landscape is the result of 20thC commercial activity, and it is flat and well screened; however, there are valued landscape features within the Radley Lakes area, most notably Thrupp Lake. Furthermore, there is a need to consider the attractive farmed landscape to the north of Radley Lakes, and also the River Thames / Thames Path to the south.</p> <p>Increased recreational use (Option 2) would likely involve some additional small scale facilities, e.g. modest car parking and paths; however, there is confidence in the ability of any new built features to be assimilated within the landscape. Another consideration is the future management of vegetation; however, in this respect there is little potential to differentiate the alternatives. Under either option it is likely that open areas would remain open, and vice versa. Finally, there is a need to consider the possibility of making attractive parts of the landscape more accessible than they are currently, notably Orchard Lake, to the south of Thrupp Lake.</p> <p>There is some reason to suggest that supporting recreation and access is in accordance with landscape objectives; however, on balance the alternatives perform on a par.</p>
Land	=	=	<p>No land within the Radley Lakes area is currently used for agriculture, and there are limited additional considerations, with implications for the alternatives.</p> <p>One consideration is 'land stability' given inherent issues associated infilled land, and it is noted that this might be a particular issue for land to the west of Thrupp Lake, which was quarried and infilled first, with infilling standards 'a product of their time'. This will be an important consideration in the future, should it transpire that there is a need to select a route for a new road link (see discussion within Box 6.1); however, it is not a factor with a bearing on the current alternatives.</p>
Waste	=	=	<p>The alternatives do not have any implications for the achievement of waste management objectives. The Radley Lakes area is not known to be under consideration for any waste management uses.</p>

Topic	Option 1 - Nature conservation	Option 2 - Nature conservation and quiet recreation	Discussion
Water resources	=	=	Pollution to surface waters and groundwater is potentially a consideration within the Radley Lakes area, given the extent of water bodies and also the extent of industrial/commercial operations. However, there is little potential to differentiate the alternatives. Increased recreational activity (Option 2) could generate some issues/impacts (e.g. litter), but these would be minor.
Services and facilities	2	1	<p>Supporting access to, and recreational activities within, the Radley Lakes area (Option 2) performs very well in terms of this objective. There is the potential to attract greater numbers of visitors from both Radley and Abingdon, albeit access is currently a barrier for residents of Radley and East Abingdon (given that Thrupp Lane is the only point of access, and is not suited to walking/cycling, as discussed above).</p> <p>Option 2 would help to build the case for a long term solution to access issues, through a new road link to the west. Depending on the route selected, there might be the potential to support ease of access between White Horse Leisure Centre and Radley Lakes (also, a 'green finger' extends into Abingdon from this area, hence the potential for a new walking link from Radley Lakes to the heart of residential Abingdon can be envisaged).</p>
Deprivation	=	=	<p>Communities in the vicinity of Radley Lakes do not stand-out as relatively deprived; however, one important consideration is the need to retain the employment opportunities that currently exist on site, recognising that some employees might find it difficult to find equivalent alternative work in the local area, were the employment activities to cease.</p> <p>Increased recreational activity within Radley Lakes could lead to some conflict with employment uses, e.g. with HGV movements being hindered by increased walkers, cyclists and visitor car movements. However, on the other hand, Option 2 would help build the case for a long-term solution to access issues (as discussed above), which could in turn generate permanent jobs on the JCSL site (which currently has temporary planning permission only).</p>
Housing	=	=	The alternatives do not have any implications for the achievement of housing objectives.

Topic	Option 1 - Nature conservation	Option 2 - Nature conservation and quiet recreation	Discussion
Health	2	1	<p>The issues/impacts here are very similar to those discussed above, under 'Services and facilities', but in terms of 'Health' objectives it is possible to go a step further, and conclude the likelihood of Option 2 resulting in 'significant positive effects'.</p> <p>Another factor, which lends support to Option 2, is the need to ensure a safe and secure environment. There are currently some problems of anti-social uses within the Radley Lakes area, and so there is merit to attracting people to the area, through support for well managed quiet recreation.</p> <p>N.B. significant effects are predicted on the assumption that new safe access arrangements are put in place (i.e. a new road enabling HGVs to access the industrial and commercial areas from the west, rather than from the north along Thrupp Lane). Also, it is important to note that significant effects would be realised in the long term, i.e. new access arrangements are unlikely in the short term, albeit the Parish Council's wishes to progress with selection of a preferred route option, and implementation, as soon as possible).</p>
Transport	2	1	<p>There could be some transport challenges in the short term, in that there could be an increase in walking/cycling along Thrupp Lane. However, as discussed above, Option 2 would help to build the case for a long term solution to access issues, through a new road link to the west.</p>

Summary appraisal findings

In summary, Option 2 (support for both nature conservation and recreation uses) stands-out as performing best in terms of a number of objectives, albeit it is recognised that several of these objectives are closely linked. In short, the appraisal serves to highlight a considerable opportunity to support quiet recreation within the Radley Lakes area, which in turn will lead to benefits to surrounding communities, particularly in terms of 'Health' objectives. Work in the short term to support quiet recreation (in addition to nature conservation) could support achievement of the long term aspiration to improve access to the area, which in turn could result in a 'step change' in recreational activity.

'Biodiversity' is also a key objective, and in this respect it is predicted that both options perform equally well. There is every reason to assume that 'quiet recreation' uses (Option 2) would be well managed, such that there is no conflict with nature conservation objectives.

No major draw-backs to Option 2 are highlighted, although it is notable that there would be a need to consider the possibility of increased recreational uses conflicting with established employment uses, and creating some challenges in transport / road safety terms.

8 DEVELOPING THE PREFERRED APPROACH**8.1 Introduction**

- 8.1.1 The aim of this Chapter is to present the Parish Council's response to the alternatives appraisal / the Council's reasons for developing the preferred approach in-light of alternatives appraisal.

8.2 The Parish Council's outline reasons

"RPC notes the appraisal of alternatives set out in section 7 above, and supports the adoption of Option 2 (support for both nature conservation and quiet recreation) for the reasons given.

The planning conditions for former minerals working in the Lakes area already require restoration for nature conservation. The important policy issue is whether the area should be actively managed for both nature conservation and quiet recreation.

The report shows that nature conservation will bring significant benefits, especially for biodiversity. Quiet recreation is shown to bring additional benefits, most significantly for the health of residents, without diminishing the benefits from nature conservation. A key consideration here is the size of the area, which – if properly planned and managed - enables conflicts to be avoided. The report also highlights the importance of providing a new access route to the Lakes area, removing the current road safety hazards: it finds that providing for quiet recreation will help provide momentum for a solution, but that the full benefits will not be realised unless and until such a solution is realised

These findings support the strategy and policies in the consultation draft of Radley's Neighbourhood Plan. The Plan provides for a planning policy to support nature conservation and quiet recreation land uses, and for a community action to promote the active management of the land for these purposes and to work towards a new access solution. In carrying forward the community action, RPC will work in partnership with other stakeholders and will take account of the more detailed findings in the report, including the potential to provide benefit for Abingdon residents through linked walking routes."

PART 2: WHAT ARE SEA FINDINGS AT THIS CURRENT STAGE?

9 INTRODUCTION (TO PART 2)

9.1.1 This part of the report presents an appraisal of the Pre-submission Radley Neighbourhood Plan.

9.2 Methodology

9.2.1 The appraisal identifies and evaluates 'likely significant effects' on the baseline, drawing on the sustainability objectives identified through scoping (see Table 4.1) as a methodological framework. In total, there are 14 objectives relating to:

- Air quality
- Biodiversity
- Climate change
- Flooding
- Heritage
- Landscape
- Land
- Waste
- Water resources
- Services and facilities
- Deprivation
- Housing
- Health
- Transport

9.2.2 Every effort is made to predict effects accurately; however, this is inherently challenging given the strategic nature of the policies under consideration, and understanding of the baseline (now and in the future under a 'no plan' scenario) that is inevitably limited. Given uncertainties there is a need to make assumptions, e.g. in relation to plan implementation and aspects of the baseline that might be impacted. Assumptions are made cautiously, and explained within the text (with the aim is to striking a balance between comprehensiveness and conciseness/accessibility to the non-specialist). In many instances, given reasonable assumptions, it is not possible to predict 'significant effects', but it is possible to comment on merits (or otherwise) of the draft plan in more general terms.

9.2.3 Finally, it is important to note that effects are predicted taking account of the criteria presented within Schedule 1 of the SEA Regulations.¹⁵ So, for example, account is taken of the probability, duration, frequency and reversibility of effects as far as possible. Cumulative effects are also considered, i.e. the potential for the plan to impact an aspect of the baseline when implemented alongside other plans, programmes and projects. These effect 'characteristics' are described within the appraisal as appropriate.

¹⁵ Environmental Assessment of Plans and Programmes Regulations 2004

10 APPRAISAL OF THE PROPOSED SUBMISSION PLAN

10.1 Introduction

- 10.1.1 As introduced above, the aim of this chapter is to present an appraisal of the draft plan ‘under’ the SEA framework. The appraisal is essentially presented as a series of 14 narratives.

N.B. within each narrative specific policies are referred to only as necessary, i.e. it is not the case that systematic consideration is given to the merits of each of the 17 proposed policies in terms of each sustainability topic/objective/issue. This approach is in accordance with the regulatory requirement, which is simply to present an appraisal of ‘the plan’.

10.2 Air quality

Maintain air quality and where necessary address any air pollution hotspots.

- 10.2.1 There are no known air pollution hotspots in Radley Parish, and it is unlikely that policies within the Radley Neighbourhood Plan will have implications for the Abingdon Town Centre Air Quality Management Area (AQMA).
- 10.2.2 Policies are proposed to ensure the integration of the North-West Radley strategic site (an allocation within Vale LPP1, and the subject of a recently submitted planning application), which could have positive implications for ‘modal shift’ away from the private car / towards walking/cycling; however, there are not likely to be notable air quality benefits.
- 10.2.3 PP10 (Radley Lakes) supports increased recreational uses (‘quiet recreation’) within the Radley Lakes area; however, there is little reason to suggest that increased car movements in the Radley Lakes area will lead to poor air quality.
- 10.2.4 In conclusion, **significant effects are not predicted**.

10.3 Biodiversity

Protect and enhance all biodiversity and geological features.

- 10.3.1 PP10 (Radley Lakes) supports increased recreational uses (‘quiet recreation’) within the Radley Lakes area, the majority of which is designated as a Local Wildlife Site and a Conservation Target Area; however, there is little potential to suggest that this will lead to conflicts with nature conservation objectives. With the Radley Lakes area planned as a whole, there will be good potential to ‘compartmentalise’ uses, e.g. making areas of lower biodiversity / nature conservation value attractive for use by dog walkers. There will also be good potential to manage access to the more sensitive areas (e.g. areas where there are currently established populations of orchids and other uncommon flora), e.g. with footpaths and information boards.

Also of note is supporting text within the ‘Natural and Historic Environment’ section of the plan, which references the importance of ‘biodiversity gain’ within the Radley Lakes area, and states: *“development on the strategic housing sites in the NP area [should be] at worst biodiversity neutral. If, however, there is any biodiversity loss either on these sites or on others in the North Abingdon area they will be seeking an off-set through a contribution to the Radley Lakes strategy.”* It is **recommended** that this aspiration is reflected in a formal planning policy.

- 10.3.2 In conclusion, increasing access to nature within the Radley Lakes area is considered supportive of nature conservation objectives, and **significant positive effects** are predicted.

10.4 Climate change

Reduce the level of contribution to climate change made by activities within the area

- 10.4.1 No policies are proposed to support/encourage low carbon infrastructure / high standards of 'sustainable design and construction', recognising that adequate policy is in place through the Vale of White Horse Local Plan (notably CP37, Design and Local Distinctiveness; CP 40, Sustainable Design and Construction; and CP41, Renewable Energy). This approach is deemed proportionate and ultimately suitable, as such **significant effects are not predicted**.

10.5 Flooding

Support the resilience of the area to the potential effects of climate change, including flooding

- 10.5.1 A large proportion of the Radley Lakes area falls within an established flood risk zone, hence there is a need to consider the possibility of policy support for an increase in 'quiet recreation' uses, through PP10 (Radley Lakes), could potentially lead to a degree of risk; however, national guidance does not preclude recreational uses within flood risk zones (e.g. the Thames Path is, of course, at risk of flooding). Flood risk could potentially be a constraint to the development of permanent structures within the area; however, there are no plans for any such structures. Whilst the Earth Trust has planning permission for a visitor centre, it is understood that the current intention is not to pursue the scheme (instead using the land for a small car park).
- 10.5.2 Also of note is PP15 (Surface drainage), which seeks to ensure that *"surface water drainage will not add to the existing site run-off or cause any adverse impact to neighbouring properties and the surrounding environment."* The supporting text goes on to explain that: *"In the case of the North-West Radley site it is particularly important that the survey and any remedial measures required address the two main areas where repeated problems have been encountered: the sewerage network between upper and Lower Radley; the capacity and resilience of the Lower Radley pumping station."* Drainage / wastewater management is an important climate change adaptation consideration, recognising the likelihood of increased storminess. This policy is particularly supported recognising existing issues with Radley's sewer system.¹⁶
- 10.5.3 In conclusion, recognising the issues (problems) that currently exist and the potential for problems to worsen in the future, **significant positive effects are predicted**. However, it is recognised that positive effects are dependent on policy being in place in time to influence determination of the planning applications for the LPP1 strategic site allocations.

10.6 Heritage

Protect, maintain and enhance the cultural heritage resource within the Neighbourhood Plan area, including the historic environment and archaeological assets.

- 10.6.1 There are 27 listed buildings within Radley Parish, falling into four main groups -
- The medieval Church and vicarage – the latter being arguably the oldest in the land;
 - The site of the manor currently occupied by the College where there are former manorial residences as well as more recent College buildings;
 - Dwellings, mainly in Lower Radley, dating to the sixteenth and seventeenth centuries, built originally as the homesteads of small yeoman farmers;

¹⁶ The plan document explains that: *"Radley is served by an inadequate and out of date sewer system. The main frame work was designed and installed in the late 1950s/early 1960s for the village as then. The system is a combined sewer where both foul water and storm water drain into the outfall pipe. Foul water originates from dwellings, the pub and Radley College. Storm water enters the system from roads, roofs, some land drainage, parking and other hardstanding areas. Stormwater flows are therefore significant... Since 2013 the poor condition and resilience of the infrastructure has led to a series of incidents..."*

- Eighteenth century barns built following enclosure of the open fields.
- 10.6.2 Also, Radley's archaeology provides outstanding evidence of human occupation from Neanderthal times, through the Iron and Bronze ages to more recent Romano-British and medieval settlement. A part of the NP area is designated as an ancient monument, and this includes the site of a series of Bronze Age burial barrows.
- 10.6.3 In light of these issues, PP17 (Historic Environment) seeks to supplement LPP1 policy by requiring: *"Applicants for development should review the Historic Environment Record for the area and submit a statement describing the significance of any heritage assets that might be affected and specifying measures to safeguard them. Where the proposed site has potential to contain archaeological deposits a desk based assessment, and where necessary a field evaluation, should be carried out. The County Archaeologist should be consulted on the method of assessment and on any mitigation required."*
- 10.6.4 Finally, there is a need to consider area / site specific proposals -
- PP1 (Old Coal yard site) supports development of the Old Coal Yard, to the south of Radley Village / west of Thrupp Lane, subject to certain criteria being met. This site is sensitive from a historic environment perspective, as it partially intersects a Scheduled Monument, however, the following criteria is proposed: *"The scheduled monument (archaeological remains) on the west side of the site should be protected through a conservation management plan agreed with the County Archaeologist."*
 - PP10 (Radley Lakes) supports increased recreational uses ('quiet recreation') within the Radley Lakes area, which includes one listed building (Thrupp House), and could have implications for land to the north, which includes two listed buildings and Scheduled Monuments. It is not clear that additional car movements, associated with increased recreational use, would be of a scale where there could be negative implications for heritage assets, and there is also a need to consider the possibility that increased use of the area by local people will increase appreciation of local heritage. Also, there is a need to consider the possibility that increased recreational use will lead to a situation whereby Abingdon Town Council is minded to promote a circular walk from the historic centre of Abingdon, via Abbey Meadows, to Radley Lakes and back. Such a walk could help to build appreciation of local heritage.
- 10.6.5 In conclusion, the Draft Plan is supported, from a heritage perspective, but **significant effects are not predicted**.

10.7 Landscape

Protect and enhance the character and quality of landscapes and townscapes.

- 10.7.1 The proposal is to support development at two sites (albeit the plan will not formally 'allocate' the sites, i.e. result in a situation whereby the sites have planning permission in principle, and their development can be assumed, and count towards forward projections of land supply) -
- PP1 (Old Coal yard site) - supports development of the Old Coal Yard, to the south of Radley Village / west of Thrupp Lane, subject to certain criteria being met. The proposal is to require that development *"should be in accord with a master plan which minimises any sense of intrusion into the Green Belt and restores a rural character free of dereliction. The masterplan should include measures for locating the development to the east of the site, for retention of tree belts and for removal of hard standings..."* The proposal to 'restore a rural character' reflects the current brownfield nature of the site, and implies that development must have a positive effect on the landscape baseline. Hence this policy is supported. It is **recommended** that the policy specifies the number of homes potentially suitable.

- PP2 (Central allotments site) - supports development of the current allotments by the railbridge, subject to certain criteria being met. Criteria do not reference any particular landscape sensitivity, reflecting the fact that the site falls within the settlement boundary / outside of the Green Belt.

10.7.2 PP10 (Radley Lakes) supports increased recreational uses ('quiet recreation') within the Radley Lakes area, which falls within the Green Belt. The Radley Lakes area is not notably sensitive in landscape terms, recognising that much of the landscape is the result of 20thC commercial activity, and it is flat and well screened; however, there are valued landscape features within the Radley Lakes area, most notably Thrupp Lake. Furthermore, there is a need to consider the attractive farmed landscape to the north of Radley Lakes, and also the River Thames / Thames Path to the south. Increased recreational use would likely involve some additional small scale facilities, e.g. modest car parking and paths; however, there is confidence in the ability of any new built features to be assimilated within the landscape. Another consideration is the future management of vegetation; however, in this respect there is little potential to suggest that increased recreational use will lead to any issues. It is likely that open areas would remain open, and vice versa. Finally, there is a need to consider the possibility of making attractive parts of the landscape more accessible than they are currently, notably Orchard Lake, to the south of Thrupp Lake.

10.7.3 In conclusion, the Draft Plan is supported, from a landscape perspective, but **significant effects are not predicted**.

10.8 Land

Ensure the efficient and effective use of land.

10.8.1 The Parish is likely to include some 'best and most versatile' quality agricultural land; however, neighbourhood Plan policies are not set to have any implications for agricultural land (with the two sites supported for development not comprising agricultural land, and no land within the Radley Lakes area currently being used for agriculture).

10.8.2 There are two further considerations -

- The Old Coal Yard site is likely to be associated with a degree of land contamination, hence PP1 (Old Coal yard site) is set to require remediation.
- There are land contamination and land stability issues within the Radley Lakes area, reflecting extensive past quarrying operations and subsequent infilling of quarries. Lands stability is known to be a particular issue for land to the west of Thrupp Lake, which was quarried and infilled first, with infilling standards 'a product of their time'. This will be an important consideration in the future, should it transpire that there is a need to select a route for a new road link (see discussion within Box 6.1).

10.9 Waste

Promote sustainable waste management, encouraging the reduction, re-use and recycling of waste.

10.9.1 Proposed Neighbourhood Plan policies do not have any notable implications for the achievement of waste management objectives. The Radley Parish area is not known to be under consideration for any waste management uses.

10.10 Water resources

- 10.10.1 Drainage / wastewater management is an important 'water' consideration, in that there is a need to ensure that wastewater is treated at Wastewater Treatment Works, rather than being released to the environment untreated. Two policies are proposed to supplement Local Plan policy -
- PP15 (Surface drainage) seeks to ensure that *"surface water drainage will not add to the existing site run-off or cause any adverse impact to neighbouring properties and the surrounding environment."* The supporting text goes on to explain that: *"In the case of the North-West Radley site it is particularly important that the survey and any remedial measures required address the two main areas where repeated problems have been encountered: the sewerage network between upper and Lower Radley; the capacity and resilience of the Lower Radley pumping station."*
 - Also, PP16 (Sewerage) seeks to ensure *"adequate sewerage infrastructure capacity exists both on and off the site to serve the site and that the development would not lead to problems for existing users. To this end the developer should fund a Drainage Survey and Report, covering the whole area served by the outfall sewer, to a specification agreed with Thames Water..."*
- 10.10.2 Both of the above policies are supported recognising existing issues with Radley's sewer system. Error!Bookmark not defined. Finally, Pollution to surface waters and groundwater is potentially a consideration within the Radley Lakes area, given the extent of water bodies and also the extent of industrial/commercial operations. Increased recreational activity, as supported by PP10, could generate some issues/impacts (e.g. litter), but these would be minor.
- 10.10.3 In conclusion, recognising the issues (problems) that currently exist and the potential for problems to worsen in the future, **significant positive effects are predicted**. However, it is recognised that positive effects are dependent on policy being in place in time to influence determination of the planning applications for the LPP1 strategic site allocations.

10.11 Services and facilities

Cater for existing and future residents' needs as well as the needs of different groups in the community, and improve access to local, high-quality community services and facilities.

- 10.11.1 Several policies are proposed in order to achieve the following two key plan objectives:
- *"[Secure] the provision of infrastructure which is sufficient to support the needs of existing and new residents, in particular, roads and junctions, sewerage systems, primary health care services, primary school facilities, cycle and walking routes and station access and parking;*
 - *"[Secure] the health and well-being of Radley residents through the provision of: improved community facilities which promote social interaction and decrease isolation; [and] good connectivity between the new developments and existing settlements to provide for an integrated supportive community sharing parish-based services and facilities..."*
- 10.11.2 The following policies are of particular note -
- PP6 (Facilities on NW Radley site) - seeks to ensure delivery of a playground positioned so as best to complement existing provision in the village.
 - PP7 (Facilities on South Kennington site) - seeks to ensure delivery of a playground and a space reserved for a shop and a community room.
 - PP9 (Primary Healthcare) - states that: *"Developers of the NW Radley and South Kennington strategic sites should, in consultation with the relevant Clinical Commissioning Groups, either provide a site for a new surgery or should contribute to new or expanded facilities elsewhere. Their contribution should be proportionate to the additional patients resulting from the sites."*

- 10.11.3 PP12 (Cycling and Walking) states that: *“New development should support the achievement of the Radley Cycling and Walking Strategy, including by: On site: Delivering those stretches of cycle tracks which pass through the sites; providing secure cycle storage; incorporating good quality pavements for pedestrians and mobility scooters, with dropped kerbs onto roadways; Off site: Contributing towards stretches of cycleways which link the sites to the station and other key destinations; contributing to additional safe cycle storage at the station; contributing to improved pavements between the sites and key village facilities.”*
- 10.11.4 PP13 (Connectivity) requires: *“Access to the strategic housing sites should be designed so as to be safe, to integrate the village as a community and to avoid unnecessary car use. Vehicle access should be ‘outward facing’ onto, or towards, the main through route. There should additionally be good quality and convenient ‘inward’ pedestrian and cycle access to village facilities and amenities and to existing communities.”* The supporting text goes onto explain that -
- “With the new development there is the opportunity to get good connectivity right from the outset so the new housing sites do not become separate satellites. This applies particularly to the North-West Radley site’s relationship with the Radley village centre... without a new link there would be a long circuitous walk via inadequate narrow pavements which do not lend themselves to widening.”*
- 10.11.5 Also of note are the following policies -
- PP8 (Replacement sites and buildings) - states that: “Where replacement sites or buildings are needed for community facilities they should, unless in situ construction make this impracticable, be ready before the old facilities are removed.”
 - PP2 (Central allotments site) - supports development of the current allotments by the railbridge, subject to certain criteria being met, including: *“A suitable replacement allotment site is provided by the Parish Council which is of at least equivalent quality and is located at reasonable convenience to the community; [and] Radley Village Shop (the community shop) is given an option to occupy part of the site.”*
 - PP14 (Radley Station) states that: *“Developers of strategic housing sites should contribute to the costs of the measures to improve facilities at Radley station and in particular to increased secure cycle storage.”*
- 10.11.6 In conclusion, numerous policies are proposed that will helpfully supplement LPP1 policy. This approach is strongly supported, and is predicted to result in **significant positive effects**, recognising that LPP1 allocations will result in 900 additional homes in Radley Parish, increasing the dwelling stock by 90%. It is also noted that benefits could be felt by existing residents of Abingdon, in addition to existing residents of Radley, i.e. benefits could be felt at a ‘larger than local’ scale.
- N.B. positive effects are dependent on policy being in place in time to influence determination of the planning applications for the LPP1 strategic site allocations.

10.12 Deprivation

Reduce deprivation and promote a more inclusive and self-contained community.

- 10.12.1 Communities in the vicinity of Radley Lakes do not stand-out as relatively deprived. There are four mobile home sites comprising approximately 300 homes; however, there are not thought to be any particular issues to be addressed here. The mobile home sites are supported by the Parish Council, as a source of affordable and flexible housing, and this support is reflected in a proposed ‘community action’.

- 10.12.2 One important consideration is the need to retain the employment opportunities that currently exist in the Radley Lakes area, recognising that some employees might find it difficult to find equivalent alternative work in the local area, were the employment activities to cease. Increased recreational activity within Radley Lakes could lead to some conflict with employment uses, e.g. with HGV movements being hindered by increased walkers, cyclists and visitor car movements. However, on the other hand, increased recreational activity would help build the case for a long-term solution to access issues, which could in turn generate permanent jobs on the JCSL site (which currently has temporary planning permission only).

10.13 Housing

Provide everyone with the opportunity to live in good quality, affordable housing, and ensure an appropriate mix of dwelling sizes, types and tenures.

- 10.13.1 Neighbourhood Plan policies are proposed to supplement Local Plan policies in relation to the mix of housing types, reflecting locally available evidence which shows a relatively high need for smaller homes / a relatively low need for larger homes. PP4 (Housing size and type at larger sites) states that: *“Decisions on the mix of dwelling size and type on housing sites capable of a net gain of eleven or more dwellings in the NP area should take account of... the evidence of demand from Radley residents and their families, and of the guideline figures for housing for older people, set out in RPC’s paper Housing requirements for the Radley Strategic Sites.”* The evidence shows a need for a housing mix in Radley Parish that is significantly different to that which is needed across the wider Vale of White Horse District, and on this basis, **significant positive effects** are predicted.

10.14 Health

Improve the health and wellbeing residents within the Neighbourhood Plan area.

- 10.14.1 As per the discussion above, under ‘Services and facilities’, the following policies are supportive of the achievement of health and wellbeing objectives: PP2 (Central allotments site); PP6 (Facilities on NW Radley site); PP7 (Facilities on South Kennington site); PP8 (Replacement sites and buildings); PP9 (Primary Healthcare); PP12 (Cycling and Walking); PP13 (Connectivity); PP14 (Radley Station). Also supported is PP4 (Housing size and type at larger sites), recognising that the aim is to meet the housing needs of older people in particular.
- 10.14.2 PP10 (Radley Lakes), which supports increased recreational uses (‘quiet recreation’) within the Radley Lakes area, is also supported. However, there is a slight tension in road safety terms, recognising that the main point of access - Thrupp Lane - is currently heavily used by HGVs. In the longer term, there is an expectation that increased recreational use of the Radley Lakes area will help to build the case for a new road link, which would remove HGV traffic from Thrupp Lane.
- 10.14.3 In conclusion, **significant positive effects are predicted**, but on the assumption that that new safe access arrangements for the Radley Lakes area are put in place (i.e. a new road enabling HGVs to access the industrial and commercial areas from the west, rather than from the north along Thrupp Lane). Also, it is important to note that significant effects would be realised in the long term, i.e. new access arrangements are unlikely in the short term, albeit the Parish Council’s wishes to progress with selection of a preferred route option, and implementation, as soon as possible).

10.15 Transport

Promote sustainable transport use and reduce the need to travel.

- 10.15.1 As per the discussion above, under ‘Services and facilities’ and ‘Health’, the following policies are supportive of the achievement of ‘Transport’ objectives: PP2 (Central allotments site); PP6 (Facilities on NW Radley site); PP7 (Facilities on South Kennington site); PP8 (Replacement sites and buildings); PP9 (Primary Healthcare); PP12 (Cycling and Walking); PP13 (Connectivity); PP14 (Radley Station). Also supported is PP4 (Housing size and type at larger sites), recognising that the aim is to meet the housing needs of older people in particular.
- 10.15.2 PP10 (Radley Lakes), which supports increased recreational uses (‘quiet recreation’) within the Radley Lakes area, is also supported. As discussed above, there could be some transport challenges in the short term, in that there could be an increase in walking/cycling along Thrupp Lane; however, in the longer term, increased recreational uses should help to build the case for a new road link to the west.
- 10.15.3 In conclusion, the Draft Plan is supported from a transport perspective, in that it is supportive of objectives around ‘modal shift’, but **significant effects are not predicted**.

10.16 Conclusions

- 10.16.1 The appraisal above finds the Draft Plan to perform well in terms of a range of sustainability objectives, with no major draw-backs highlighted. Policies that seek to influence development of the three Vale LPP1 strategic housing sites, both in respect of the type of development and the approach to infrastructure delivery / upgrades, perform particularly well in terms of ‘Services and facilities’, ‘Health’ and ‘Transport’ objectives. These policies are also supported from a ‘Water’ perspective, recognising that policies are proposed to ensure that new development does not worsen existing issues around surface water runoff and wastewater management / sewerage. These policies could potentially have quite a direct influence on the planning permissions granted on these sites, albeit this is contingent on the policies being in place in time, i.e. prior to planning permissions being granted.
- 10.16.2 The proposed policy approach to Radley Lakes is also supported, in terms of a range of objectives. The appraisal serves to highlight a considerable opportunity to support quiet recreation within the Radley Lakes area, which in turn will lead to benefits to surrounding communities, particularly in terms of ‘Health’ objectives. Work in the short term to support quiet recreation (in addition to nature conservation) could support achievement of the long term aspiration to improve access to the area, which in turn could result in a ‘step change’ in recreational activity. In the short term there is a slight tension in that increased recreational activity could conflict with established employment uses, and create some challenges in transport / road safety terms; however, there will be good potential to manage the situation. It is noted that a proposed ‘community action’ is to prepare a detailed masterplan for the area.

PART 3: WHAT HAPPENS NEXT?

11 INTRODUCTION (TO PART 3)

- 11.1.1 This Part of the report explains next steps (i.e. steps subsequent to consultation on the Pre-submission Plan under **Regulation 14** of the Neighbourhood Planning Regulations) that will be taken as part of plan-making / SEA.

12 PLAN FINALISATION

- 12.1.1 **Regulation 15**, of the Neighbourhood Planning Regulations, requires that the Forum submit (to the Local Authority) the 'Proposed' Plan and a 'Consultation Statement'. The Consultation Statement must describe issues or concerns raised through the current consultation and how these were addressed when preparing the 'Proposed Plan' for submission.
- 12.1.2 **Regulation 16** then requires that the Local Authority 'publicises' the Proposed Plan so that stakeholders can make representations that may then be considered at Examination. It will be appropriate for the Local Authority to also publicise an updated version of the Environmental Report, with a view to informing representations.
- 12.1.3 **Regulation 17** requires that the Local Authority submits (to the person appointed to carry out the Examination) the Proposed Plan and a copy of any representations which have been made in accordance with Regulation 16. It may be appropriate for the Local Authority to also submit the updated Environmental Report, with a view to informing the Examination.
- 12.1.4 **Regulations 18 and 19** require that, subsequent to the Examination, the Local Authority publishes the Examiner's Report and a Decision Statement. The Decision Statement sets out whether or not the Local Authority is prepared to 'make' (i.e. adopt) the plan. If the Local Authority is prepared to make the plan, then a referendum can be held. It may be appropriate for the Local Authority to also publish an updated Environmental Report, with a view to informing the Referendum.
- 12.1.5 **Regulation 20** states what the Local Authority must do when the plan is 'made' (i.e. adopted). The SEA Statement must be published alongside the made Plan, with a view to providing:
- information on the decision, i.e. an explanation of why the final plan approach was decided-upon in light of SEA and consultation; and
 - measures decided concerning monitoring.

13 MONITORING

- 13.1.1 At the current time, there is a need to present 'measures envisaged concerning monitoring'.
- 13.1.2 The Draft Plan proposes that monitoring efforts should be focused on the three LPP1 strategic housing allocations, stating -
- "Where there is a departure from a planning permission (for instance failure to implement a condition), or failure to obtain planning permission, RPC will take this up with the developer and/or notify the Vale as appropriate. Where the departure is significant RPC will press VWHDC to take enforcement action."*
- 13.1.3 This is broadly supported, although the Council might want to consider what 'outcomes' could also be a focus of monitoring, e.g. monitoring of traffic (including walkers/cyclists) along Thrupp Lane and/or monitoring of flooding and/or water pollution incidents.

APPENDIX I - REGULATORY REQUIREMENTS

As discussed in Chapter 2 above, Schedule 2 of the Environmental Assessment of Plans Regulations 2004 explains the information that must be contained in the Environmental Report; however, interpretation of Schedule 2 is not straightforward. Table A links the structure of this report to an interpretation of Schedule 2 requirements, whilst Table B explains this interpretation.

N.B. This report is not the Environmental Report, but aims to present the required information nonetheless.

Table A: Questions answered by this Environmental Report, in-line with an interpretation of regulatory requirements

Questions answered			As per regulations... the Environmental Report must include...
Introduction	What's the plan seeking to achieve?		<ul style="list-style-type: none"> An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes
	What's the SEA scope?	What's the sustainability 'context'?	<ul style="list-style-type: none"> Relevant environmental protection objectives, established at international or national level Any existing environmental problems which are relevant to the plan including those relating to any areas of a particular environmental importance
		What's the sustainability 'baseline'?	<ul style="list-style-type: none"> Relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan The environmental characteristics of areas likely to be significantly affected Any existing environmental problems which are relevant to the plan including those relating to any areas of a particular environmental importance
		What are the key issues and objectives that should be a focus?	<ul style="list-style-type: none"> Key environmental problems / issues and objectives that should be a focus of (i.e. provide a 'framework' for) assessment
Part 1	What has plan-making / SEA involved up to this point?		<ul style="list-style-type: none"> Outline reasons for selecting the alternatives dealt with (and thus an explanation of the 'reasonableness' of the approach) The likely significant effects associated with alternatives Outline reasons for selecting the preferred approach in-light of alternatives assessment / a description of how environmental objectives and considerations are reflected in the draft plan
Part 2	What are the SEA findings at this current stage?		<ul style="list-style-type: none"> The likely significant effects associated with the draft plan The measures envisaged to prevent, reduce and offset any significant adverse effects of implementing the draft plan
Part 3	What happens next?		<ul style="list-style-type: none"> A description of the monitoring measures envisaged

Table B: Questions answered by this Environmental Report, in-line with regulatory requirements

<u>Schedule 2</u>	<u>Interpretation of Schedule 2</u>	
<i>The report must include...</i>	<i>The report must include...</i>	
(a) an outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes;	An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes	i.e. answer - <i>What's the plan seeking to achieve?</i>
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan	Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance	i.e. answer - <i>What's the 'context'?</i>
(c) the environmental characteristics of areas likely to be significantly affected;	The relevant environmental protection objectives, established at international or national level	
(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan'	
(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;	The environmental characteristics of areas likely to be significantly affected	
(f) the likely significant effects on the environment including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance	i.e. answer - <i>What's the 'baseline'?</i>
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;	Key environmental problems / issues and objectives that should be a focus of appraisal	
(h) an outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	An outline of the reasons for selecting the alternatives dealt with (i.e. an explanation of the 'reasonableness of the approach)	i.e. answer - <i>What has Plan-making / SA involved up to this point?</i> [Part 1 of the Report]
(i) a description of the measures envisaged concerning monitoring.	The likely significant effects associated with alternatives, including on issues such as... ... and an outline of the reasons for selecting the preferred approach in light of the alternatives considered / a description of how environmental objectives and considerations are reflected in the draft plan.	
	The likely significant effects associated with the draft plan	i.e. answer - <i>What are the assessment findings at this current stage?</i> [Part 2 of the Report]
	The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the draft plan	
	A description of the measures envisaged concerning monitoring	i.e. answer - <i>What happens next?</i> [Part 3 of the Report]

Whilst Tables A and B signpost broadly how/where this report meets regulatory requirements, as a supplement, Table C presents a discussion of more precisely how/where regulatory requirements are met.

Table C: 'Checklist' of how and where (within this report) requirements have been, are and will be met.

Regulatory requirement	Discussion of how requirement is met
Schedule 2 of the regulations lists the information to be provided within the Environmental Report	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Chapter 3 ('What's the plan seeking to achieve') presents this information.
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	These matters have been considered in detail through dedicated scoping work, which has involved dedicated consultation on a Scoping Report (2017). The 'SEA framework' – the outcome of scoping - is presented within Chapter 4 ('What's the SEA scope?'). Also, more detailed messages - i.e. messages established through context and baseline review - are presented within Appendix II.
c) The environmental characteristics of areas likely to be significantly affected;	
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.;	
e) The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation;	<p>The SEA framework is presented within Chapter 4 ('What's the scope of the SEA'). Also, messages from the context review are presented within Appendix II.</p> <p>With regards to explaining "<i>how... considerations have been taken into account</i>", Chapter 8 explains the Parish Council's 'reasons for supporting the preferred approach', i.e. explains how/why the preferred approach is justified in-light of alternatives appraisal (and other factors).</p>
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);	<ul style="list-style-type: none"> Chapter 7 presents alternatives appraisal findings (in relation to Radley Lakes policy, which is a 'stand-out' plan policy area). Chapters 10 presents an appraisal of the Pre-submission Plan. <p>As explained within two separate methodology sections (one dealing with alternatives appraisal methodology and the other draft plan appraisal methodology), as part of appraisal work, consideration has been given to the SEA scope, and the need to consider the potential for various effect characteristics/dimensions.</p>
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	The appraisal highlights certain tensions between competing objectives, which might potentially be actioned by the Parish Council, when finalising the plan. Also, a number of specific recommendations are made.

Regulatory requirement	Discussion of how requirement is met
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	<p>Chapters 5 and 6 deal with ‘Reasons for selecting the alternatives dealt with’, in that there is an explanation of the reasons for focusing on particular issues and options.</p> <p>Also, Chapter 8 explains the Council’s ‘reasons for selecting the preferred option’ (in-light of alternatives appraisal).</p> <p>Methodology is discussed at various places, ahead of presenting appraisal findings, and limitations are also discussed as part of appraisal narratives.</p>
i) description of measures envisaged concerning monitoring in accordance with Art. 10;	Chapter 13 presents measures envisaged concerning monitoring.
j) a non-technical summary of the information provided under the above headings	The NTS is a separate document.
<p>The Environmental Report must be published alongside the draft plan, in-line with the following regulations</p> <p>authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2)</p>	<p>At the current time, this Environmental Report is published alongside the Draft Plan, under Regulation 14, in order to ensure informed consultation responses.</p>
<p>The Environmental Report must be taken into account, alongside consultation responses, when finalising the plan.</p>	
<p>The environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of any transboundary consultations entered into pursuant to Article 7 shall be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure.</p>	<p>Appraisal findings presented within this Environmental Report will inform plan finalisation, alongside consultation responses.</p>

APPENDIX II - CONTEXT AND BASELINE REVIEW

Introduction

As discussed in Chapter 4 (What's the scope of the SA?) the SA scope is primarily reflected in a list of objectives ('the SA framework'), which was established subsequent to a review of the sustainability 'context'/ 'baseline', analysis of key issues, and consultation. The aim of this appendix is to present a summary key issues emerging from context/baseline review.

Biodiversity

The Sugworth Site of Special Scientific Interest falls entirely within the Neighbourhood Plan area. Notified under Section 28 of the Wildlife and Countryside Act in 1986, the Sugworth SSSI is 0.6 ha in size and is located within the north western section of the Neighbourhood Plan area. Sugworth SSSI is at present the only presumed Cromerian Interglacial site associated with Thames deposits.

With regards to locally important sites, Abbey Fishponds Local Nature Reserve (LNR) is located directly next to the western boundary of the Neighbourhood Plan Area. The LNR is approximately 7 ha in size and over 450 species are featured on the most recent list (2012), some of which are located within the annexes of the European Habitats Directive (92/43/EEC) and European Birds Directive (79/409/EEC).

Radley Little Wood (approximately 3 ha), Radley Large Wood (approximately 23.1 ha) and Radley Gravel Pits (inclusive of the Radley Lakes) are all Local Wildlife Sites within the Neighbourhood Plan area featured in the 2016 list published by the Thames Valley Environmental Records Centre (TVERC).

A number of priority species and habitat types have been identified throughout the Neighbourhood Plan area, with a large amount recorded at Thrupp Lake. Thrupp Lake is one of a series of former gravel pits (11.7 ha), some of which have been filled or partially filled to create a series of shallow lakes which are collectively known as the Radley Lakes (discussed above). There is also Ancient and Semi-Natural Woodland in the north of the plan area.

Climate change mitigation

The NPPF identifies climate change as a key challenge for the planning system to address and requires it to assist in the movement towards a low carbon economy. The South East of England is likely to face significant challenges from a changing climate and changing weather patterns. The full range of expected climate change impacts are set out in publications from UK Climate Projections 2009 (UKCP09, to be reviewed in 2018) and from other national and international bodies. As set out in these publications, a range of risks may exist for the Neighbourhood Plan area.

CO2 emissions are consistently high for the Vale of White Horse, compared to that of both the South East and England as a whole since 2005. Furthermore, the Vale of White Horse has observed a smaller percentage decrease in total CO2 emissions per capita between 2005 and 2012 (10.3%) in comparison to the South East of England (15.9%) and England (16.6%).

Communities

The Index of Multiple Deprivation (IDM) 2015 – which provides a measure of deprivation based on factors such as income, employment, health, education, housing and crime – ranks the Neighbourhood Plan area as being within the top 30% least deprived category in England (based on the two Lower Super Output Areas (LSOAs) located wholly/partly within the Neighbourhood Plan area). These two LSOAs also have low crime levels and low health deprivation and disability.

Population increase in the Neighbourhood Plan area is low. Between 2001 and 2011 the population of Radley increased by 2.2%, lower than the 4.6% average for the district and over 5% lower than the regional and national counterparts of 7.9%.

The Neighborhood Plan area is sufficiently served by day-to-day facilities and amenities. It has a large public school for boys (Radley College), a primary school, two working farms, a church, a public house, a community shop and a village hall. It has good public transport links with a bus service which runs every 20 minutes to Oxford and Abingdon, and an hourly train service to Oxford, Didcot and London.

Economy and employment

The IMD (2015) identifies the two LSOAs covering the Neighbourhood Plan area as having excellent levels of employment. This is in line with census data (2011) which identifies that the majority of residents of residents in the Neighbourhood Plan area (27.9%) are employed within professional occupations. This is higher than the values for the Vale of White Horse (23.2%), the South East (18.7%) and England (17.5%).

Radley College is the largest employer within the parish. There are some jobs in the parish associated with sand and gravel processing and on a temporary industrial estate around the former gravel pits in the south of the parish, and a handful of jobs related to agriculture.

Qualification levels in the Neighborhood Plan are reasonable. The number of residents in the Neighbourhood Plan area with a Level 4 qualification broadly aligns within the regional and national trends, but is 7.4% less than the value for the Vale of White Horse. Additionally, 21.3% of the population within the Neighbourhood Plan area have no qualifications, broadly aligning with the national average (22.5%), but higher than the average for the South East (19.1%) and Vale of White Horse (16.7%).

Flood risk and other climate change adaptation issues

National planning policy and guidance seeks to ensure that inappropriate development in areas at risk of flooding are avoided by directing development away from areas at highest risk, but where development is necessary, by making it safe without increasing flood risk. There is also a need to take account the likely impacts of climate change and in considering the approach to development apply a sequential test to steer new development to areas with the lowest probability of flooding.

Land adjacent to the River Thames along in the north eastern, and eastern and southern sections of the Neighbourhood Plan lie within Flood Zone 3 (areas identified as being subject to high probability of fluvial flooding). Lower Radley, along with the greenfield land directly to the south west are located within Flood Zone 2 (areas identified as being subject to low-medium probability of flooding).

Surface water drainage and sewer flooding is also a risk for some parts of the Neighbourhood Plan area. Land directly adjacent to the River Thames (eastern boundary), along with the stream extending south through Radley Park (north western section) is at medium-high probability of surface water and sewer flooding.

Based on the most recent Strategic Flood Risk Assessment for the Vale of White Horse, published in 2013, no Critical Drainage Areas within the Neighbourhood Plan area are identified, and hence there are no surface water management plans currently in place.

Health

Broadly speaking, health and well-being within the Neighbourhood Plan area is very good in comparison with the regional and national averages.

However, there is an ageing population within the Neighborhood Plan area, with a higher proportion of residents within the 60+ age group in comparison to the regional and national trends. The percentage aligns to the proportion in the Vale of White Horse; however, there is a need to account for the figure being skewed by Radley College boarders. Due to boarders at Radley College, the census records that 39.8% of individuals within the Neighborhood Plan area are between 0-24 years of age, significantly higher than the values for the Vale of White Horse (28.7%), the South East (30.2%) and England (30.8).

The ageing population of the Neighborhood Plan area has the potential to increase pressures on community and healthcare services and is therefore a significant influence on the future health and well-being.

Housing

Within the Neighbourhood Plan area, a high proportion (74.3%) of residents either own their home outright or with a mortgage. This is higher than the values for the Vale of White Horse (70.3%), the South East (67.6%) and England (63.3%). Notably, there are fewer residents living in socially or privately rented properties when compared to regional and national averages. Furthermore, 12.7% residents within the area are living rent free, which is over 10% higher than the regional and national trends.

Radley's housing tenure profile is unusual in that (i) about 300 households live in mobile homes (which are owned but sit on rented land) and (ii) about 90 households are Radley College staff living in accommodation owned by the College. Further information on the housing mix in the area is presented within a housing policy paper [here](#).

Historic Environment

The Neighbourhood Plan area has a rich historic environment. Features recognised through historic environment designations include statutory listed buildings (four Grade II* and twenty six Grade II listed buildings), and two scheduled monuments (Settlement sites north of Wick Hall, and Settlement site east of Goose Acre Farm), which are nationally designated. At the local level, there are currently no conservation area designations within the Neighbourhood Plan area, however, Nuneham Courtenay Conservation Area is located adjacent to the Neighbourhood Plan area.

Landscape

National Character Areas (NCAs) are landscape areas which share similar characteristics, following natural lines in the landscape rather than administrative boundaries. Developed by Natural England, NCA profiles describe the natural and cultural features that shape each of these landscapes, providing a broad context to its character. The Neighbourhood Plan area is located at the boundary of two National Character Areas, with the Upper Thames Clay Vales NCA completing encircling the Midvale Ridge NCA.

Characteristic of The Upper Thames Clay Vales, and relevant to the Neighbourhood Plan area, is the large river system of the River Thames which drains the Vales, and the Vale of White Horse which is made distinct by large arable fields.

The Midvale Ridge NCA is characteristically wooded, with a third of the woodland within the NCA designated ancient woodland. Also characteristic of the NCA, and relevant for the Neighbourhood Plan area, is the mixed pastoral and arable landscape with large, geometric fields divided by hedges and regularly spaced hedgerow trees punctuated by blocks of woodland.

At the regional level, Oxfordshire County Council completed a landscape character assessment in 2004, known as the 'Oxfordshire Wildlife and Landscape Study' (OWLS). The OWLS culminated in the development of twenty four landscape character types (LCTs), with their names reflecting their characteristic land cover. The following LCTs are located within the Neighbourhood Plan area:

- Alluvial Lowlands LCT borders the River Meadowlands LCT in the southern section of the Neighbourhood Plan area, including Lower Radley and the majority of Thrupp Lake. Restricted to lowland areas, this LCT includes flat landscapes of river valleys associated with alluvial soils, and is characterised by a regular pattern of medium-sized hedged fields with permanent pasture and arable cropping.
- River Meadowlands LCT borders the River Thames along the eastern boundary of the Neighbourhood Plan area, and is a linear riverine landscape with a flat, well defined alluvial floodplain. It has a pastoral character with meadows, wet and semi-improved pasture.
- Terrace Farmland LCT is located within the central section of the Neighbourhood Plan area and is a flat, open, intensively farmed landscape overlying river gravel terraces.
- Wooded Estatelands LCT is located in the northern section of the Neighbourhood Plan area, including Radley Large Wood which is semi-natural and ancient woodland. The small villages contained within this LCT are interspersed with large blocks of ancient woodland and mixed plantations of variable sizes.

Green Belt designation covers the whole of the NP area except the 'inset' area around Radley village, and the two strategic sites. There is a need to enhance beneficial use of Green Belt and to improve damaged and derelict land in GB, both relevant to Radley Lakes area (para 81 NPPF).

Transport

The neighbourhood plan area has good links to Oxford and the north via the A34 north-facing interchange in the north of the Parish. The link to the south is currently via Abingdon Town Centre or the ring road to the north of Abingdon, where there are issues of traffic congestion. Congestion issues are also present at Kennington Road and Sugworth Lane.

Radley station is located in the central section of the Neighbourhood Plan area, providing direct services to Oxford (to the north) and Didcot Parkway (to the south). Services are one per hour during off peak hours, increasing in frequency at peak times of the day. At Oxford railway station, residents of the Neighbourhood Plan area can utilise services to a variety of national destinations including Manchester and Newcastle. At Didcot Parkway, there are connecting services to Cheltenham, Bristol and Cardiff. There are also roughly two services per hour (one direct and one indirect), connecting Radley to London Paddington.

The community is also served by the number 35 main bus service, connecting residents to Abingdon and Oxford via Kennington. There is also a reasonable network of cycle routes and footpaths. The Thames Path National Trail runs for about 4 miles through the parish along its eastern boundary, and the Oxford Green Belt Way also bisects the Parish. Additionally, the National Cycle Route 5 passes through the Neighbourhood Plan area.

Car ownership in the neighbourhood plan area is relatively high. Over 75% of residents within the Neighbourhood Plan area have access to either one or two cars or vans, with these modes of transport the most popular choice for travelling to work. Journeys concentrate on key parts of the road and rail networks at peak times of day, leading to congestion, delays and unreliability.

Water

The main watercourse flowing through the Neighbourhood Plan area is the River Thames, directly adjacent to the eastern boundary. Additionally, there is a network of small streams / drainage channels which flow into the Thames, notably around Radley fishing lake (north eastern section) and the Radley Lakes (southern section) within the Neighbourhood Plan area.

The Nitrates Directive (91/676/EEC) requires Member States to identify areas where groundwater has nitrate concentrations of more than 50 mg/l nitrate or is thought to be at risk of nitrate contamination. Areas associated with such groundwater are designated as Nitrate Vulnerable Zones (NVZs) within which Member States are required to establish Action Programmes in order to reduce and prevent further nitrate contamination. NVZs for 2017-2020 started on January 1st 2017, with the entirety of the Neighbourhood Plan area designated as a Surface Water NVZ area, defined as an area of land that drains into a freshwater body which has, or could have if action is not taken, a nitrate concentration greater than 50mg/l.

Observations from Thames Water identify that Radley is served by an inadequate and out of date sewer system. The main framework was designed and installed in the late 1950s/early 1960s for the village as then. The system is a combined sewer where both foul water and storm water drain into the outfall pipe. Foul water originates from dwellings, the pub and Radley College. Storm water enters the system from roads, roofs, some land drainage, parking and other hardstanding areas. Storm water flows are therefore significant. Since 2013 the poor condition and resilience of the infrastructure has led to a series of incidents causing traffic disruption, pollution and disamenity.