Thame Green Living Plan

A plan to protect and improve the environment of Thame for the long-term health and vitality of the town and its community.

Consultation version July 2018: *This is the version of The Green Living Plan approved on 19 June 2018 by Thame Town Council for public consultation. Following consultation a revised version of the Plan will then be produced with more specific proposals.*

This Green Living Plan was prepared for Thame Town Council on a voluntary basis by the RSA Thame Group.

RSA Fellowship | THAME GROUP

What is a Green Living Plan?

The Thame Neighbourhood Plan of 2013 enabled the people of Thame to contribute to and vote on the location of new development sites required by our local planning authority. The process established Thame as a front-runner with the new opportunities given by law for greater control over local development.

The content of Neighbourhood Plans is, however, strictly limited by law. The Thame Neighbourhood Plan is designed to identify suitable sites for development around the town but cannot include many wider considerations of infrastructure or environment that materially affect how people can live pleasant and healthy lives there. Likewise, a Neighbourhood Plan cannot cover how our natural environment is affected by ever-increasing development.

The Thame Neighbourhood Plan does, however, recommend the preparation of a Green Living Plan for Thame. The absence of any available precedent or defined structure for such a plan has been a major challenge but has also given the opportunity to think and plan more holistically for the broader environment and vitality of the town and its community.

The Green Living Plan has been in development for some time and has passed through several drafts. It has now reached the point of being offered for public comment and the first stage of what is intended to be full community consultation.

In accepting the political reality that we will have many more homes in our area, this plan is a call to act to protect and enhance the quality of life in the things that really matter - the air we breathe, the green spaces we use, the water that is essential to all life, our overall wellbeing, and the natural world that surrounds us. We can be highly effective if we act together.

This Green Living Plan is itself intended to be *green* and *living*, suitable for our changing environment. It aims to outline key environmental issues we face, suggest local options available to us and, where appropriate, make specific proposals. As times change and we face new challenges, the plan should be revisited and adapted as appropriate. It is in three main parts:

Part 1 sets out the objectives, approach and processes involved.

Part 2 sets out a detailed analysis of the five main focus areas covered.

Part 3 follows the approach of the Neighbourhood Plan, initially as a framework, to set out specific recommendations and a Delivery Strategy, intended for regular review and update.

The RSA Thame Group acknowledges and thanks those who have worked with us or contributed to this plan. Please see Appendix 1 for further details. This version of the Green Living Plan is now submitted for public consultation and will be revised in light of feedback received. The revised Green Living Plan will be submitted for final approval to Thame Town Council in a process intended to run alongside development of the proposed new Thame Neighbourhood Plan, for which it is intended to be a key evidence base.

While this plan acknowledges international and national issues and initiatives, it sets out objectives and options for our local community in terms of things we can do here and now that will improve the lives of current and future generations.

In preparing this Green Living Plan for Thame we are mindful that Thame is not an island; it not only has interactions with its surrounding villages and towns, but also lies on the border of the county jurisdictions of Oxfordshire and Buckinghamshire. As such it is influenced, directly or indirectly, by more than one planning regime. To make this document manageable we focus on Thame but with regard also to wider issues. We hope this Green Living Plan for Thame will encourage other communities to develop similar plans using shared principles adapted to their own local issues. We will welcome closer engagement with such parties in the future.

RSA Thame Group[1]
on behalf of Thame Town Council
June 2018

The GLP as a 'Green-print' - A request

This plan has been developed by and is the copyright of members of the RSA Thame Group acting as honary consultants to Thame Town Council. Although this plan is developed for and targeted at Thame we propose to adapt it as a 'green-print' to be made available for others for the benefit of their communities, whether towns, villages or rural. We would however request that for the GLP format to retain its force and focus wherever it is used:

a) the overall shape, scope, thrust and values of this GLP are retained; and

b) the contribution of Thame and the work of the RSA Thame Group (and those who have supported it) in producing this GLP is fairly acknowledged.

Contents

Terms and Abbreviations used generally in this Plan

Expressway - the proposed Oxford to Cambridge Expressway (see 1.3)

GLP - this document, the Green Living Plan for Thame

NPCC - Thame Town Council Neighbourhood Plan Continuity Committee

NPPF - National Planning Policy Framework

OCC - Oxfordshire County Council

RSA TG - the RSA Thame Group

SODC - South Oxfordshire District Council

TNP - Thame Neighbourhood Plan 2013

TTC - Thame Town Council

Part 1 - Approach And Process

1. Background

1.1 Thame is an attractive, historic market town set within farming country in South Oxfordshire, recognised as a highly desirable place to live. The town, however, faces the increasing challenge of retaining its environment and vitality whilst accommodating substantial additional housing and employment. Its location makes it attractive for commuting, close to the mainline Haddenham and Thame Parkway (H & T) station and the M40 motorway, 7 miles from the Chiltern Hills, 10 miles from Aylesbury and 14 miles from Oxford. With a vibrant High Street, it also acts as a focal point for many villages around, in both Oxfordshire and Buckinghamshire. This places increased strain on its resources and infrastructure.

1.2 Thame Town Council (**TTC**), acting through its Neighbourhood Plan Continuity Committee (**NPCC**) has commissioned the RSA Thame Group to act as honorary consultants to the Council to prepare and develop the Green Living Plan for Thame (**GLP**)[2]. This is seen as an evolutionary process between the RSA Thame Group and Thame Town Council in which relevant organisations, individuals and the community will be fully engaged. This GLP will be consistent with (but not limited to) the specific proposals in the TNP. It will be substantially related to the Thame area as defined in the TNP but will also, where appropriate, reflect issues affecting towns and villages across the rest of Oxfordshire and the county border in Buckinghamshire.

1.3 Thame faces an additional, and potentially critical, challenge in the shape of the proposed Oxford to Cambridge Expressway, a possible southern route of which could run just to the north of Thame and on via Aylesbury to Milton Keynes. The government has also indicated a wish to see intensive development along the route. All this has material implications for Thame which need to be thought about now, as plans could move ahead rapidly once the preferred route is chosen.

2. Why a Green Living Plan for Thame and Why Does It Matter?

2.1 The objective of the Green Living Plan for Thame

The objective is a plan to protect and improve the environment of Thame for the long-term health and vitality of the town and its community.

2.2 Our environment - We live in a fast-changing world, where we leave our mark in many ways, often without considering the full consequences of our actions. Part of this is making our contribution to recognising the UK's legal obligation to reduce the greenhouse gases and to address other environmental issues that threaten our way of life. What does really matter, how do we balance the well-being of the future against the challenges of everyday life now, and what can we do here and now? This plan concentrates on 5 key areas where we can make a real difference.

- open space, green routes and natural world diversity - the spaces around and between us, and the importance of protecting our natural wildlife;
- water - water and clean rivers and avoiding flooding after storms;
- air - the quality of the air that we breathe and the environment around us;
- energy - energy efficiency and alternatives to using finite energy sources;
- waste - the amount we throw away, and how we dispose of it.

2.3 Will doing something locally make any difference? - Most people now accept that our climate is changing. Even if there is still debate as to the precise causes and the likely consequences there is much we can and need to do now to help protect our own well-being and that of future generations here in this town and area. Even minor changes repeated across many areas can help tilt the balance. Think about the effects of having nowhere to escape and walk in peace, of drinking contaminated water or having no respite from breathing polluted air. These are not just national and international issues, they are local issues too.

2.4 How can I make a difference? - This plan is living and dynamic, and one to which everyone can contribute. There are also some things you can do yourself to help preserve our environment and the long-term health and vitality of all:

- Discuss - Read this GLP, discuss it, argue about it if need be, and contribute to the process of making it a real plan for Thame and the local area.
- Research - Help research any of the issues further and add to the discussion.
- Groups - Set up or join a group to look at specific issues and proposed recommendations.
- Lobby - Participate in and lobby through your local Residents' Association, or the government or any relevant organisations on issues in this GLP about which you feel especially passionate.

- Object - Object to developments that are not 'sustainable' (see below).
- Re-focus - Change the way you act, e.g. by using energy more efficiently, switching power supplier to use more renewable sources, walking more and driving less, switching off your car engine when at a stop, consider using an electric car, and taking shorter showers or smaller baths.

2.5 Our vision - The vision is to see this GLP developed and embraced by the wider community of Thame and its surrounding area, not just as a guide to all those planning how the town develops but also as part of the way we live full and healthy lives in the future, in tune with our natural surroundings.

3. Green Living Principles And Approach

3.1 The meaning of 'environment' and 'sustainability'

What is meant by 'environment'? We regard this as:

The external conditions that influence how people, animals and plants grow and develop[3].

In formal planning 'sustainability' is used in many ways and for many purposes. Planners may see it as matching employment to housing, which potentially creates a never-ending spiral of more local jobs needing more housing and more housing needing more jobs. Many see a 'sustainable community' as one where people do not need to use their cars for everyday requirements. Others focus on our natural environment and see sustainability as living without reducing our natural resources or as enhancing quality of life whilst conserving our green spaces, natural habitats, biodiversity and wildlife.

This plan embraces all these and proposes to define 'sustainability' as:

The degree to which our overall and local resources may be exploited without harming wildlife, plants or people.

This means that a plan for a sustainable future must:

a) avoid unnecessary waste;

b) recognise that our natural resources are sensitive and limited; and

c) use resources to limit ongoing longer-term damage to ourselves, animals, plant life, and future generations.

The GLP implies a healthier and less destructive way to live overall.

3.2 The regulatory environmental framework and national planning policy

Planning inspectors' decisions must be based on the current planning laws and regulations, which continue to evolve and change under political pressures. Driven by government policies to have ever more houses built, it may induce a growing sense of acting unfairly against existing residents. New housing targets are given to district planning authorities, such as SODC, who allocate them among the towns and villages in their area. The process is followed through into Local Plans and Neighbourhood Plans, which must comply with the latest Local Plan for the area.

The current position is that for planning purposes there is a presumption in favour of sustainable development.

Objection is too easily dismissed as 'Nimbyism', ignoring the fact that new estates are being built without adequate regard to the infrastructure and effect on the environment of the communities on which they are imposed.

The National Planning Policy Framework (NPPF) - 2012 (Note: The NPPF is in the course of being updated as this consultation version of the GLP is being prepared. Future editions will reflect the NPPF changes when applicable and practicable.)

The NPPF - seeks to maintain a viable balance between more homes and a sustainable environment. For example, it states that development should:

- 'seek positive improvements in …people's quality of life;
- achieve net biodiversity gains for the future; and
- improve the conditions in which people live, work, travel and take leisure.

In addition, local plans and policies should:

- set out a positive vision for the future of the area;
- encourage the use of renewable resources;
- contribute to…reducing pollution;
- make the fullest use of public transport, walking and cycling
- give priority to pedestrian and cycle movements;
- incorporate facilities for charging plug-in and ultra-low emission vehicles;
- protect, enhance and link to public rights of way and access;
- consider locally important green areas for special protection.'

Many of these aspirations lie at the heart of this Green Living Plan, but seem to have become lost in the planning and development process.

3.3 Approach

In encouraging sustainability (see 3.1 above) the GLP anticipates some hard choices in following principles into specific actions. Wherever possible this plan seeks voluntary options, while some situations will require mainstream community action.

Green principles - The GLP proposes generally accepted standards which all will be encouraged to follow on any future development.

Community benefit - Some proposals will require change where the overall community benefit outweighs individual drawbacks. Examples might be speed restrictions or new road crossings, creating delays for some but improving safety and air quality for all.

Community options - Other proposals may have community benefit but be matters of individual choice, such as optional individual investment in a suitably located solar farm bringing additional renewable energy to the area.

Individual choices - Finally there are personal actions which each of us, at home or at work, can choose to opt into, with resulting green living benefits at local levels. Examples include smart meters, water saving measures in WCs and showers, or solar panels on homes and businesses.

3.4 Limitations

Planning - The local planning authority, SODC, has limited ability to refuse planning applications which are in keeping with the Local Plan and any current valid Neighbourhood Plan. It cannot impose additional environmental standards on developers or increase the standards required by the then current Building Regulations. The community's best answer to this is twofold:

1) To press for the recommendations of this GLP to be observed and included in the next neighbourhood plan to the maximum extent possible;

2) to encourage builders seeking to develop in the area to undertake to provide relevant benefits as set out in this plan.

Land outside neighbourhood plan areas remains even more vulnerable.

Highways - While the GLP seeks improved pedestrian and cycling facilities and stresses the importance of clean air, it does not cover Thame's travel and transport issues generally. These are intended to be the subject of a Thame Transport Plan, which will take account of recommendations of the GLP. It should also be noted that roads and road crossings are the responsibility of the Highways Department of OCC, not of TTC or SODC.

Infrastructure funding - As is now generally understood, there is currently a distinct shortage of funding for infrastructure projects, including road improvements. But when new opportunities or funds do arise the community of Thame needs to be able to respond quickly and positively to ensure the best outcome for the town. Otherwise funding largely has to be allocated from money received from developers as a requirement of planning permission. This is in turn migrating from 's106 payments', technically designed to mitigate harm caused by development, to Community Infrastructure Levy (**CIL**) payments designed to help the broader infrastructure, but unfortunately likely to yield lower financial returns to the town.

Cars and parking - Thame faces the challenge of retaining a vibrant High Street while managing car use in the town centre. There are major trade-offs here for personal convenience on the one hand and noise, congestion and ultimately life-threatening pollution on the other. There is no right or wrong answer, but the community needs fully to understand the implications of the choices available and to make its voice heard for our longer-term well-being.

4. Impact, Focus And Scope

The GLP should be expected to impact on all areas of life and behaviour, and all forms of development, energy use and waste management in the area.

4.1 Focus areas

This GLP needs clear focus to be readily understandable and manageable. This GLP accordingly adopts five main areas, which are colour-coded for ease of reference. There will of course be overlaps between areas, such as green spaces which perform several functions, and the convenience versus health issues regarding car use referred to in 3.4. above. These focus areas, developed in section 2 of this plan, can be summarised as:

- Green (spaces & routes) - parks, gardens, recreation and other green spaces; walking and cycle routes; wildlife areas and corridors and biodiversity;
- Blue (water & drainage) - water flows, flood and drainage management;
- Grey (air and environment) - improving air quality, reducing pollution and encouraging other environmental protection;
- Red (energy & efficiency) - energy saving, renewable energy capture, use and management;
- Brown (waste & reuse) - waste avoidance, waste management and re-cycling.

This division is not intended to be exclusive, and other areas can be added if and when the need arises. Examples might include low and zero carbon buildings, food, allotments and burial grounds, all of which have green elements.

4.2 Making connections

This plan seeks to encourage a more holistic approach to green issues. It aims to improve connections within and between developments, so as to benefit the town's overall amenities and communities. The ambition is to create and link green networks for wildlife and for people rather than isolated routes and stand-alone spaces within developed areas which are vulnerable to neglect.

5. Process

5.1 Amenity groups

In the consultation phase contact will be made with as many residents, amenity, specialist and local support groups as practicable, and their views considered.

5.2 Funding

TTC and other organisations will be asked to consider what funding (including Section 106 and Community Infrastructure Levy - i.e. contributions from developments towards amenities) and what other official, charitable, personal and other funding sources may be potentially available.

5.3 GLP recommendations and ongoing development

This plan recommends that, to the extent that it is lawful and practicable:

- All proposals before the TTC and NPCC are reviewed so as to take account of the green living principles and recommendations in this GLP.
- Relevant local authorities are encouraged to support the objectives of this plan when dealing with any potential developments in or affecting Thame.
- This GLP is accepted as a main part of the Evidence Base for the next issue of the Thame Neighbourhood Plan (expected in 2019) with the GLP recommendations explicitly recognised.

5.4 Further research, experience and expertise

A GLP recommendation is that Thame encourages local engagement and builds a databank of available sources of information and a directory of expertise potentially available on GLP issues. This should be accompanied by an assessment of priorities for further research and an allocation of responsibilities for follow up and maintaining momentum.

5.5 Evolutionary approach

The GLP should be developed, reviewed and revised on an ongoing basis, with a regular review against objectives, milestones and timetables, and further reviews against emerging legislation and good practice as necessary.

5.6 Communication and consultation

- The GLP is designed to be accessible and informative. This means it should be supported by readily available information (e.g. website, social media and leaflets). Communication is key to engagement; wide consultation and discussion will be vital to its success and essential for building local involvement.
- Consultation will be encouraged by initial discussions followed up with progressive local consultation as the GLP develops; including seeking to develop strong links with local schools and a close engagement of young people with the subject overall.

6. Resources, Timescales And Next Steps

Thame Town Council has overall ownership of the Neighbourhood Plan, with detailed progress delegated to the NPCC.

Given pressure on TTC councillors and officers from housing policy changes, developer pressure, limited OCC engagement, cross-county border issues and many other factors, real progress on the GLP will depend on a substantial groundswell of community support and practical engagement.

The RSA Thame Group has limited resources, creating a need and opportunity for other groups, existing and new, both in Thame and in areas around[4], to assist in the development and delivery of the GLP.

6.1 Individuals and local groups - at the core of the Green Living Plan is an ambition to engage individuals, small groups, and all those wanting to both understand more and contribute to the goals of the GLP.

6.2 Partner organisations - These may be social or business organisations, schools or other bodies. Without widespread support and the scale that larger organisations can bring, there is a limit to what can be achieved.

6.3 Focus and co-ordination - Different sections of the GLP will appeal to separate groups. We need, however, to keep a strong overall approach together with a focus on key areas to ensure that work done is relevant and consistent. It is especially important that the community is kept fully engaged and involved.

6.4 Timescales and Delivery Strategy - The intention is that progressive drafts of the GLP, whilst no doubt adding issues, will hone down its recommendations. At that point, provisional timescales and milestones can be added to each section/ proposal whereas it would be premature to do so at this first stage. Section 3 of the GLP has accordingly been drafted as potential framework for such a detailed Delivery Strategy.

Part 2 - Detailed Analysis and Focus Areas

Overview Of Part 2

Part 2 - 'Detailed Analysis' - addresses each of the five focus areas mentioned in Part 1 and how they are seen to affect Thame. Potential actions are then summarised at the end of each section of Part 2 and will be developed in Part 3 as the GLP moves forward.

Each focus area includes national planning and Neighbourhood Plan comments and recommendations where appropriate. Some of these recommendations are reflected in conditions attached to planning consents granted for new developments.

It is specifically recommended that local planning authorities are made aware and encouraged to be supportive of the Green Living Plan on the basis set out in 5.3 of Part 1 above, so that any decision on an application for release or discharge of planning conditions also takes fully into account the implications for this plan. It is in the longer-term interests of all local authorities that Thame remains a healthy and vibrant place to live and work.

1. Open Spaces, Green Routes & Our Natural World (Green)

Introduction

We are losing our green and open spaces at an alarming rate, with implications that are not immediately apparent. When we lose open space we also lose connections that are vital to a healthy life and future - the plants, shrubs, hedgerows, animals, insects, birds and most other forms of natural life that rely on that open space and in getting from one part of their world to another. If we box them in and cut them off we will rapidly kill them, as we have been doing for many years. The same applies to people. As our towns swell, it becomes harder and takes longer to access the countryside, which we become less and less inclined to use, often leaving us with routes through more and more streets lined with houses. We are at risk of becoming penned in ourselves just as the natural world around us becomes penned in.

This need not happen. The building of more houses need not squeeze out the space and the connections that we and the creatures around us need to remain healthy. Our best answer is to have the vision, confidence and commitment to insist that development does not destroy the very things we most value about being part of the country. It is a question of balance.

Our green spaces and the health of our natural world as well as ourselves are also inextricably linked to the quality of the water that flows through our streams and rivers and the air that we breathe. These issues are considered separately in the next two sections. We need clean air to enable our natural world to survive and prosper just as we need it to stay healthy ourselves. In turn we need pleasant and safe places to walk and cycle if we are to leave our cars at home and reduce the pollution and major environmental damage they cause. This should not be a lot to ask.

A key objective in this section is therefore to encourage people to use their cars as little as possible, by providing green spaces and pleasant routes to use for walking and cycling, to enjoy the fresh air and to take exercise to benefit well-being. To that end this plan envisages a future where Thame will have a network of footpaths that create an effective non-vehicular Thame ring route with connections to the town centre and other key areas plus safe cycling routes into town and nearby railways or bus stations.

These objectives are supported by the principles of the National Planning Policy Framework (NPPF) and the concept of 'sustainable development' - See Part 1 3.1 and 3.2.

1.1 Open And Green Spaces

- Thame is already below average - Thame is seriously short of general recreational space. The SODC Open Space, Sport and Recreation Facility Assessment (2008 - update in progress) identified Thame as having less green space within the town than the average in the SODC area. This is even before the addition of 775 dwellings under the existing TNP plus the many windfall additions and major further allocations under the proposed SODC Local Plan 2033. Previous consultation led to explicit TNP recommendations to provide more public open space and improve existing open space.
- Additional open spaces - Despite all the extra housing allocations, the only current TNP plans are those stated in the next paragraph; those apart there are no additional parks, nature reserves, communal gardens or the like yet proposed. Space needs to be allocated now for new parks or green spaces in Thame. As Thame is currently under-provided in this respect, further development plans need to be matched by over-providing communal green spaces up to recommended levels.
- Communal areas - The TNP includes plans for the following (note: sites C1 and C2 are south of Wenman Road and east of Thame Park Road; site D is west of Thame Park Road; site F is north-west of Oxford Road - see map at Appendix 3 at end of the GLP):

- Public open space - approximately 1.9 ha of public open space to be provided from Lord Williams's Lower School site (if developed).
- Communal green areas - in new housing developments - either small areas within the streetscape, or publicly accessible adjacent open space such as riverside walks (allowing for flood areas.) These areas are, however, often retained within developer ownership and therefore 'at risk' of future development applications unless legal open space status or public ownership is guaranteed for them.
- Allotments - Sites C2, D and F each carry allotment land.
- Burial space - Site C1 carries burial space with adjacent car parking.

- 'Spatial vision' - The TNP has a 'spatial vision' which recommends new publicly accessible open spaces (some of which might remain in primarily agricultural use):
  - extending the Cuttle Brook Nature Reserve in the development of Site F, and to the south of Sites C and D, providing a 'soft edge' to Thame;
  - as a public park if Lord Williams's Lower School is developed; and
  - as part of the development of land at The Elms.

These must be seen as minimum requirements.

- Green Living principles - We recommend the adoption of suitable green living principles that, so far as the law allows: all new developments over a specified size have suitable green facilities as recommended by this plan and that all reasonable efforts be made to preserve and if possible enhance existing public green spaces in the town. This principle should be read in conjunction with the recommendations about footpaths, cycleways and biodiversity corridors in this section.
- Open spaces in completed development - Developers usually insist on retaining the open green space within developments and leaving the control of this to a management company or residents. Such spaces can easily become neglected or misused. It is proposed that TTC seek ways to facilitate a common forum for such groups with suitable standards for developments and availability of common facilities.
- The 'soft edges' and key edge features of Thame - The TNP emphasises in several places the importance of a 'soft edge' to Thame by ensuring visual connections between the countryside and developments close to the edge of the town. It also stresses the need to minimise the visual impact of new development on views from the countryside. Several points arise:
  - There are areas around the town where increased and potentially intrusive commercial use has occurred (and where further planning applications are being pursued.) Some of these areas may be technically outside the TNP area but their use directly negates the principles of the TNP.
  - Commercial development should not be permitted to obstruct footpaths and cycleways and should be positively encouraged to facilitate them in accordance with the NPPF.
  - Open space/fields at the edge of the existing, built areas of Thame and Moreton should be critical barriers to further development.
  - The TNP specifically draws attention to the importance of protecting the ridge line to the east of Thame[5] as an edge to development. This appears to relate to the sloping field on the north-east of the town opposite the Lea Park estate (between the sewage works and the Rugby Club ground). This is a major attractive feature deserving protection, possibly as additional protected green space supported by access to existing footpaths to Kingsey and Haddenham.
- Woodland, orchards and gardens - Thame is surrounded by farmland but itself is noticeably short of trees. There are great opportunities here, such as:
  - The planting of additional, even modest, copses of trees and shrubs - these can make a major difference to the town's landscape and amenities[6].
  - Community-led gardens, orchards and similar schemes, set up in many towns, which are known to be highly therapeutic and beneficial to health[7].
  - General tree planting which is also effective in mitigating pollution.
- Leisure seating in Thame - It is vital for people to remain active, but there is limited seating for people to rest in Thame. This can be a problem for the elderly, who are likely to make up an increasing part of the town's population. Coffee shops should not be the only place to sit down. This plan recommends more amenity seating in and around the town centre, potentially financed by memorial funding, and ideally accompanied by small beds of shrubs, trees and flowers. (Note: Such seating should be well designed to minimise misuse and damage.)

1.2 Walking Routes In And Across Thame

- 20-minute walking zone assumption - The TNP assumed a 20-minute walking zone (from/ to the Town Hall) giving a total walking time both ways of 40 minutes. This is ideal for exercise but does not

allow for a) poor weather (rain and cold deters many), b) those with mobility problems c) those with heavy shopping and d) those who for other reasons cannot or do not wish to walk that distance. In any event the assumption does not distinguish between walking along pleasant off-road paths and walking along crowded pavements next to congested and pollution-ridden roads.

- TNP Recommendations - In response to the consultation the TNP recommended:
  - enhancing pedestrian and cycling links to the town centre through Lea Park and elsewhere to encourage those living and working there not to go by car; and
  - providing riverside walks as part of the development of Sites C, D and F.

Both are underway, although awaiting the availability of secured funding and appropriate linkages. We consider that people need much more encouragement to walk or cycle than these limited measures.

- Pavements and footpath challenges - Anecdotely, some people, including the visually impaired, partially disabled and those using mobility scooters, find the existing pavements in and around town challenging if not actually dangerous. Problems include dropped kerbs, random street furniture and 'A boards'. The report in summer 2017 by OCC's Walking and Cycling Design Guides project[8] contains some very sensible suggestions on the issue which could ideally be adopted as guidance for the town.
- Transport Plan - Walking and cycling routes should be integral parts of the proposed Thame Transport/ Travel Plan, taking note of the principles in this section.

1.3 Walking Routes And Access To Countryside Around Thame

GLP Vision - Recreational walking is acknowledged as highly beneficial, both physically and for its therapeutic effect. To put that another way, people who walk more tend to get less ill. There are ample statistics as to the effect on NHS costs. The GLP seeks to enable more people to access good quality and attractive paths with a choice of routes and destinations. The aim is to secure a great amenity for the town by advance planning of attractive walking routes through and adjacent to the countryside around Thame, with suitable joining and leaving points back into the town centre, making best use of land boundaries and natural features such as hedgerows and water courses wherever possible.

These plans should be progressed now, before further development shrinks the opportunities still further. These ideas could also be developed with other connections, such as to the Oxfordshire Way to the south-west (via Moreton or Tetsworth), the Chilterns to the south, improved connections to Shabbington to the west and Chearsley and beyond to the north-east. Early landowner understanding and cooperation would make a great difference and should be sought in good time.

NB: detailed recommendations will follow after consultation and be set out and developed in Part 3.

- Access to countryside - The TNP emphasises the importance of easy access to the open countryside around the town. The principle is however being eroded as new developments (commercial as well as residential) take place outside the town's traditional and TNP limits. The aspirations of the GLP accordingly extend to such areas where appropriate to meet the objectives of the plan.
- Footpaths - For a country town, the footpaths around Thame are relatively few and very diffuse. Much of the surrounding farmland is private with few public footpaths (see Appendix 2). Where there are footpaths, many suffer from extreme ruts or mud (beyond the normal for footpaths) and/or have cattle or horses which are a deterrent to walkers. Without better paths the farmland acts as another barrier, forcing people into cars to drive elsewhere, even simply to have a good walk.
- Thame and around - current walking routes - Thame has walking routes outside the town centre, as summarised in the leaflets available from the Town Hall. The main routes include the Phoenix Trail, the Cuttle Brook reserve, and walks to Moreton, Haddenham and Long Crendon, as more fully described in Appendix 2.

It is therefore a key recommendation of the GLP that better paths, linkage of paths and new footpaths (all with suitable signage, maintenance and public access rights) be essential pre-requisites to further development in and around the town, noting that some landowners have already granted sale options. It is recommended that discussions with developers emphasise that the availability of these amenities will be a key issue in the proposed allocation of further development land in the revised neighbourhood plan.

- Recommendations - An improved and coordinated footpath network as follows:
  - better footpaths across the town;
  - good access at several points to the immediate countryside;
  - linked to a pleasant round Thame circular walk or footpath ring (as exists in many other locations[9]);
  - these concepts to be enshrined within TNP2; and
  - plans to be in place ahead of any future allocation of land for development.

While recommendations for specific routes might be avoided where seen to prejudge potential development sites, it is recommended that a study of existing footpaths and natural land features, such as hedgerows and streams, will indicate where a footpath ring and connections might be possible and would not prejudice either existing farming use or future development as part of a revised TNP. Early discussions with landowners might facilitate permissive routes, as has been achieved elsewhere.

- New developments - Good (and well-signposted) footpaths through and adjacent to:
  - Site C2 (Bellway) - through estate roads with linkages to the Phoenix Trail - and avoiding the industrial estate;
  - Sites C and D, with a connection/ safe road crossing over Thame Park Road; and
  - Site D and the Phoenix Trail / Town Centre/ Moreton.
  - Any future development in Thame.
- Long Crendon - There is urgent need for a safe pedestrian and cycle crossing of the A418 by-pass, which carries dangerous high speed or crawling traffic. This becomes ever more of a barrier to the north side of Thame, even before the prospect of additional HS2 construction traffic.
- River Thame - Thanks to the Prebendal owners there is concessionary access to the meadow at the rear of the River Thame (when not flooded). But there is no other easy access from the town to the river which shares its name. The river, covered in the blue section of this plan, is a potential great amenity to which access is limited in and after wet weather. Access along the river towards Notley, linking with the Thame Valley Walk, and the Scotsgrove Brook linking with Haddenham, should be pursued while the opportunity exists. Plans also exist to extend the footpath connection from the Prebendal field to the rear of site F using the existing bridge over the River Thame; we recommend that these plans be revisited as they could help create a valuable connection between two meadow areas which are currently cut off from one another.
- Thame to Haddenham footpaths - (The proposed cycleway is dealt with in 1.4 below.) A cycleway alongside the main roads (the current most likely option) would not be ideal for pedestrians. It is therefore recommended that the footpaths between between Thame and Haddenham be improved, so that they provide a pleasant and valuable round walk to and from the two centres[10].

1.4 Cycle Routes

- TNP recommendations - The TNP identifies the need for more dedicated cycle routes.
- Cycle routes principles - There are different groups of cyclists, and whilst they have common cause, their priorities differ.
  - dedicated commuter cyclists seeking the straightest, flattest and fastest route between destinations and prepared to tackle busy roads at peak periods;
  - long distance hobby cyclists riding singly, jointly or in bigger groups;
  - leisure and would-be commuter cyclists who would cycle more in good conditions but are discouraged by unpleasant or dangerous roads; and
  - school children, who need well-lit and safe ways to school, which would also reduce parental car trips.

Facilities for all should be improved, but the emphasis in this plan is on leisure and would-be commuter cyclists and school children, where the greatest impact from car to bike is most likely to be made[11].

- Barriers to cycling - There are several apparent barriers to cycling, which will need to be properly addressed, including:
  - Equipment - having and maintaining suitable cycle, helmet, apparel etc;
  - Fitness - having a suitable level of fitness;
  - Weather - especially for leisure cyclists;
  - Potholes - an increasing deterrent and real danger to cyclists;
  - Safety - being visible and safe - the key issue for many people; and
  - Bike security - having a suitable stanchion or support at the destination to which the bike can be securely locked.
- Local cycling groups (note: there may be others)
  - Thame Cycling Club (affiliated to British Cycling) - a medium-sized club for male and female adult road bike cycling
  - Haddenham Safe Walking & Cycling Group (HSWCG) - action group involved in many initiatives, including Haddenham & Thame Cycleway (see below)
  - Thame to Haddenham Commuter Cyclists - a recent group to press for the proposed Haddenham & Thame Cycleway
  - Oxfordshire Cycling Network (OCN) - This is a small active voluntary group linked to Cycling UK Oxford, developing plans for a Strategic Cycle Network for South Oxfordshire with representation from Wallingford, Didcot, Thame and surrounding villages.
- Haddenham & Thame Cycleway - The plan is very long-standing and a prime TNP objective. Instead of the route via Scotsgrove Mill, which has major issues in crossing floodplain on what appears to be only a

footpath, the concentration now is on the feasibility of having a 'road route'. This would run alongside the busy A418 and the fast Thame Road to the station. National Cycling charity Sustrans has produced a feasibility study of the route for OCC and BCC which has (still) not been published as some information on adjacent land ownership and costs is considered confidential. This route would have complexities, including a new bridge and tackling the problematic Aylesbury Road roundabout. Costs are likely to be extremely high, with the prospect of a major funding shortfall.

- Oxford - Cambridge Expressway Project - The southern of the three proposed corridors would pass just north of Thame, adding much uncertainty as to whether and when it may be built and what further development would ensue. This might defer decision-making on critical road and traffic issues but might also present opportunities (and possibly funding) to support a more integrated approach to traffic, cycling and walking to the north of the town.
- Other cycle routes - including along the ring (or relief) road to the east and north of the town - It is suggested that ideas and a possible route be considered by a working party looking at the issues under this section of the GLP with a view to identifying possible routes. These might then be fed back into the Oxfordshire Cycling Network proposals and/or into future editions of the TNP.

1.5 Green Infrastructure And The Natural World (Biodiversity)

What is biodiversity?

Biodiversity now means the amazing, but fast declining, variety of all natural living things in our world. As Sir David Attenborough wrote in the foreword to the 2016 State of Nature Report (for the UK), 'Our wonderful nature is in serious trouble and it needs our help as never before.' As highlighted in the opening of this green section, diversity depends both on suitable spaces for plants and creatures and on connections between them. We interfere with and possibly stop that connection every time we put a concrete roadway across a piece of meadow or build on a field. Each hedgerow uprooted, or copse removed, destroys not just the homes but also the pathways for most plants and creatures that live, feed or breed there.

Why does biodiversity matter?

When you look at our woods and fields you may think that all is well, and that there isn't a crisis. But there is.

Our insect, animal and plant life is declining faster than ever in recorded memory. This is not just through climate change but because of what we humans are doing to our natural world. If we don't have insects and worms, we won't have trees and birds. If we don't have bees seeking pollen, we won't have apples on our trees, crops in our fields or flowers in our gardens. If we deplete our soil we won't be able to grow healthy crops; if we don't have hedgerows and wild grassland, we will lose our beautiful and varied mammals, all of whom contribute to the tapestry of life. If we don't protect fish, amphibians and aquatic animals, our rivers will be little more than drainage ditches. Nature is wonderfully adaptive, but it can't cope with everything we are throwing at it. We have to reverse the trend while we still can.

There are three other main reasons why biodiversity matters:

Air, environment and pollination - Trees, plants and grassland are all vital to the management of our atmosphere; they help to remove greenhouse gases to keep our air and water clean and our climate moderate; they also provide the soil for plants to grow. Those trees, plants and grassland in turn rely on birds and insects to convey and continue the natural life cycle on which we all ultimately depend, even down to the food we grow in our fields.

Health and medicine - Many plants have distinct medicinal properties which are still extensively used in preventing and treating illness.

Work and recreation - Agriculture, fishing and forestry all provide valuable jobs, relying on a healthy ecosystem for viability. With increasing leisure time and the emphasis on an active life, our trees, shrubs, plants, rivers, birds and small mammals provide valued areas for outdoor pursuits. The richness of life around us also provides a deeper human spiritual and cultural link to the land.

What has gone wrong?

The State of Nature in Oxfordshire Report was published by Wild Oxfordshire in March 2017. Its key findings include:

- Grasslands - Major and widespread historic loss of species-rich semi-natural grasslands (an estimated 97% of lowland meadow lost in England and Wales between 1930s and 1980s.)
- Rivers - See the blue section below.
- Woodland - While many areas of woodland have increased, long term declines in farmland and woodland biodiversity have put some species at serious risk of extinction.
- Orchards - A very major decline in orchards.
- Connections - Fragmented woodlands, an increase in farm holdings size plus increased development lead to continuing fragmentation of areas of good habitat and a loss of connectivity across the county.
- Variety - Monocultures (a single species of plant or tree) are much more vulnerable than polycultures (many species.) Without diversity we shall see further declines in the volume and variety of our wildlife; more critically, the loss of pollinators will adversely affect agriculture and our ability to produce food.

While precise causes are hard to prove, there is growing concern that ever-increasing intensity of agriculture supported by pesticides, even if designed to support growing populations, are major contributors to the sharp decline of wildlife of many types.

Further challenges

Our eco-systems and biodiversity face major further challenges, among others, from:

- HS2 railway;
- East-West Rail link;
- Oxford - Cambridge Expressway, growth corridor and proposed 1 million new homes;
- Water stress.

What about Government and national frameworks and policies on sustainable development?

Government policy has, for some years, recognised concerns over the depletion of natural environments and the creatures living in them, and the need to help reverse some disturbing trends[12]. Paragraph 114 of the NPPF (the National Planning Policy Framework) states that: 'Local planning authorities should… set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.' This guidance is reflected in the latest version of the South Oxfordshire Local Plan 2033 (October 2017).

The challenge for local communities, and for their town and parish councils, is to ensure that such policy is given meaningful expression when development proposals are scrutinised prior to approval and subsequently during the development and post-development periods.

Some other relevant local organisations and plans

- OxLEP - The economic importance of Oxfordshire's "natural capital" has been recognised by OxLEP, the local enterprise partnership.
- BBOWT - Berks, Bucks and Oxfordshire Wildlife Trust is a very active body dedicated to the protection of local wildlife.
- RSPB - The Royal Society for the protection of Birds is in the forefront in encouraging both birds and biodiversity habitats and support measures. A local example is its cooperation with Barratt Homes at the Kingsbrook development, east of Aylesbury, mentioned further below.
- SODC's Green Infrastructure Strategy 2011 - states that: 'A net gain in green infrastructure including biodiversity will be sought through developer works, developer contributions and the targeted use of other funding sources.' It is important that the new SODC Local Plan now addresses effectively the need to enhance green infrastructure.
- The SODC Infrastructure Delivery Plan - is due to be published imminently. It considers the level of infrastructure required to support planned growth in the district in more detail than the County level plan. This too is likely to have a bearing on the natural environment and should be taken into consideration.
- Town & Country Planning Association's / Wildlife Trusts' Good Practice Guidance for Green Infrastructure and Biodiversity (2012) - might be a valuable tool for use in examining the revised SODC Local Plan and Infrastructure Delivery Plan.

Local examples - Thame is clearly dependent upon bodies and circumstances beyond its direct control. One model that might inform future action is that of the Buckinghamshire Natural Environment Partnership[13].

What can we do about it locally?

Voluntary bodies locally are doing excellent work in trying to preserve and improve eco-systems in the face of development pressures, e.g. in the Cuttle Brook Nature Reserve, a designated Local Nature Reserve (LNR). The challenge will be to build upon such work, and that of other local nature organisations, in places where less protection is afforded to nature and to wildlife.

In a rapidly developing, rural-suburban town such as Thame a particular concern for naturalists is fragmentation. Fragmentation increases what is known as the 'edge effect', whereby the interior habitat is affected by the different conditions of the habitats on its edges. With smaller habitats this can lead to dramatic changes in plant and animal communities. The more development that takes place, the more fragmentation is likely to increase.

This plan encourages involving local landowners and farmers in all these aspects, which are not only of community benefit but overall in the interests of effective long-term farm productivity.

Reports - The first step is to build up a detailed picture of what local fauna and flora are important, to establish benchmarks, and to develop priorities for how best they can be supported and enhanced. Much is already being done in this respect.

Wildlife corridors and vegetation - We must take all possible steps to keep existing and develop more wildlife corridors. The same principle applies to vegetation, with farming and with forests, with diversity and variety being key to the health of all forms of life.

Making connections - We need a mix of actions. One is to link together existing habitat patches to create larger, more resilient sites; another is to ensure connections between those sites. This might be helped, for example, by:

- establishing wildlife-friendly field margins alongside managed hedgerows;
- tree planting and new woodlands linking existing precious ancient woodland; and
- more tree and shrub planting near roads generally to reduce the effects of air pollution.

Dogs - Green spaces are used extensively by dog walkers, for whom they are essential part of daily and, often, social life. For the most part Thame is fortunate in having responsible dog owners and maintaining a good balance between users of green spaces. This is especially important in footpaths through or adjacent to farmland and livestock. There are, however, signs of increasing numbers of professional dog-walkers through key green sites, often in charge of many animals at the same time. Unfortunately even the best- behaved dogs provide a challenge to the natural world, both natural features like river banks and water, and other creatures whose interests we are seeking to protect. As the town's

population increases and animal ownership with it, greater efforts will need to be made to accommodate our pets alongside the needs of the natural world and the other creatures that live in it.

Green urban spaces - Examples include:

- Creating gardens, parks, allotments and ponds in built-up areas.
- Fostering wild flowers, non-manicured areas and informal wood stacks in parks and churchyards to encourage pollinators and other forms of beneficial species.
- Planting and river bank improvements to existing 'green corridors' and waterways.
- Community orchards and 'green gyms', combining fitness activities with practical work.
- Enhancing natural roadside verges with planting and changed grass-cutting techniques.
- Working with conservation bodies to encourage wildlife in new developments.
- Scrutinising planning applications to seek more wildlife friendly elements.

Kingsbrook - The large scale of the Kingsbrook development near Aylesbury enabled a fruitful partnership between RSPB and Barratt Homes, but many of the initiatives there could be applied elsewhere. These include tree avenues and green corridors (with cycle and footpath routes) through developments, readily accessible public greenspace, wildflower verges, wildlife corridors under roads, wildlife meadow and orchards, retention of ancient hedgerows, fruit trees ready planted in gardens, pools and swales, hedgehog highways under fences and swift, bat and martin boxes built into or on homes[14].

Sustainable Urban Drainage - A required feature of many new developments, these could help channel rainwater along surface rills and swales to provide homes for wildlife, slowing the flow and using nature to clean the water.

Wildlife homes - Encouraging developers to add wildlife homes in their designs, such as swift boxes, and to encourage window boxes, planters and trellis.

Soil Fertility

- Soil quality - There is increasing concern about the reduction of the quality of our countryside soil. This has the double downside of reducing biodiversity and exhausting the capacity of the soil to produce good quality crops and sustain livestock.
- Intensive farming - Intensive farming techniques that encourage the heavy use of fertilisers, herbicides and pesticides are believed to be major factors in these problems. Some of these problems have to be solved at a national and international level, but there is also scope to increase awareness and make changes at a local level.
- Local improvements - This can be helped by celebrating food produced sustainably and recognising the contribution of local farmers who demonstrate a commitment to more sustainable farming methods.

1.6 Some Practical Ideas For Action

- Open space
  - Create - new communal open space to meet shortfall
  - Protect - existing accessible open spaces against development
  - Develop - TNP 'spatial vision' and 'soft edges' concepts (see 1.1 above)
  - Plant - more trees, woodlands, orchards, wildflower and public gardens
- Green routes
  - Encourage - all opportunities to make the cycle path to Haddenham a reality
  - Improve - pedestrian and cycling routes through town and around for leisure and to encourage alternatives to car use
  - Develop - vision for 'Thame-ring' walking route with connecting paths
  - Maximise - opportunities to extend riverside walks
  - Emphasise - inter-connections of routes in all future development Seek - safer routes to school and encourage cycling by all
- The natural world
  - Protect - and take practical steps to encourage plant, insect and animal life
  - Maintain - and re-introduce green biodiversity corridors and habitats
  - Develop - a closer relationship with and access to the River Thame

Further thoughts

- Examine and develop
  - green information panels and linked online resources
  - the green gym concept, i.e. keeping fit through environmental work
  - a community orchard with related seasonal events
  - the support of Oxfordshire LEP for the 'active travel' principles in this GLP
- Encourage
  - schools, families and others to support nature-friendly zones
  - countryside 'how to' sessions for residents + volunteers
  - closer relationship with local landowners and farmers to help the natural world

2. Water And Drainage (Blue)

This section covers water flows, plus water, flood and drainage management both for containment and amenity. It also touches on watercourses and the implications for biodiversity, an issue more fully covered in 1.5 above. Foul drainage and sewers are not included in this GLP as such, but failure to have effective foul sewerage could create major environmental problems for Thame and the River Thame area generally. The recent pollution of the River Thame by Thames Water at Aylesbury and the resulting damage to water and aquatic life highlight this.

Additional abbreviations used in this section:

CBNR - Cuttle Brook Nature Reserve

EA - Environment Agency

RTCT - River Thame Conservation Trust

SOS - South Oxfordshire Sustainability

STW - Sewage Treatment Works

SUDS - Sustainable Urban Drainage Systems

TW - Thames Water (Thames Water Utilities Ltd)

2.1 Green Living Principles

- Water as an essential resource - Water is essential for life, and an increasingly precious resource. We must study how to conserve it, using as little water as possible and by taking steps now to ensure adequate supplies are available for our future use.
- Clean water - Clean water is essential for plant and wildlife, and ultimately, human health. Polluted water damages the habitat, with potentially disastrous effects in and around rivers, requiring effective control to protect our environment. We need to take all reasonable steps to encourage clean water and discourage pollution.
- Flood control and management - Floodplains play an important role in storing and slowing down flood water. Floodplains should be carefully managed, learning from problematic experiences elsewhere.
- Sustainability - National Planning Policy Framework (NPPF) is direct in highlighting the conservation and enhancement of the natural environment. We must do all we can to ensure this applies to Thame's greatest natural assets, the River Thame and the Cuttle Brook.

2.2 The Thame Valley

- The Thame Valley drains much of the rainwater from around the area via a series of tributaries to the River Thame itself. After times of heavy rainfall the valley acts as a large and broad flood plain, leaving great swathes under water for extended periods.
- River Thame's relevance to the TNP - While the river is largely outside the TNP Thame area, it forms a significant part of Thame's boundary. It is a largely unused but potentially important amenity for the town. Technically the Thame area includes only its tributaries, both called the Cuttle Brook, one running through Moreton and the nature reserve to join the Thame through the meadows by the bridge at the foot of Oxford Road, and the other through Kingsey to Thame
- Overlapping responsibilities - As the river is at the margins for both Oxfordshire and Buckinghamshire, neither authority necessarily sees it as central to its planning. The bodies that do have some authority or impact over the river (such as the Environment Agency and the RTCT) have little control over how the Thame Valley develops overall, their efforts being largely devoted to managing water flows and quality and protecting the aquatic and riparian life around it.
- Challenges - The Thame Valley has significant potential challenges for the future. Chiefly among these are the potential impacts of:
  - the proposed Oxford-Cambridge Expressway - If the southern route is chosen, with its associated housing development, it would cause massive disturbance to the banks of numerous parts of the River Thame and result in silt and run-off pollution of the water course and threaten all forms of aquatic life; and
  - new reservoirs - the impact on water supplies and river flows following any new reservoir or other water catchment measures proposed by TW.

2.3 The Need For Water

- Outline - Recent reports[16] on water supplies and the increasing prospect of water shortages. Increasing population, climate change and the need to protect the environment will all put increasing demands on our water supplies. These apply especially in the rural areas of Oxfordshire, which is one of the driest counties in the country. Thame is directly affected.
- Environment Agency (EA) - The EA announced in 2016 that the Oxford area, including Thame, is already 'seriously water stressed'. This is at a time when up to 100,000 new homes and more commercial development are scheduled for the area, vastly increasing demand for water and the inevitable pressure to raise the cost of this vital resource to residents and business users.
- Thames Water (TW) - Thames Water's latest draft Water Manage Plan[17] identifies a major shortfall of water supply for the Thames region in the coming decades. TW plan

to tackle this shortfall in the short term by reducing water leakage and increasing water efficiency. In the longer term they are looking at new infrastructure, such as a huge reservoir at Abingdon[18]. The dual conflicting implications of this, of course, are potential loss of farm land, property and major disruptions to local inhabitants. Large bodies of water can, however, have amenity value and can, properly managed, attract wildlife and benefit biodiversity. The impact very much depends on how the process is created and managed.

- Hydrologists' Report - Oxfordshire Water Resources, a detailed investigation prepared in March 2016 by two experienced hydrologists on behalf of South Oxfordshire Sustainability (SOS), an environmental group covering much of the SODC area, reported concerns on the water sustainability of the area. Its main conclusions are incorporated in the comments and recommendations in the GLP[19].

2.4 Recent Experience In The Area

- Current water consumption - According to the SOS Hydrologists' report, water consumption in South Oxfordshire in 2016 was above 140 litres per head per day and the metered charge for supplying domestic water and carrying away waste water was £1.20 per cubic metre. An increasing number of properties have a water meter, the remainder being charged according to their rateable values. Thames Water encourages home owners to install meters and promotes the use of devices that lower consumption. The target by 2030 is to reduce consumption to 100 litres per head per day. The only proven method of achieving this target is by means of economic incentives, via water meters. The public invariably take action to reduce their costs by consuming less.
- Rising demand - Even if this reduction target is realised, the overall demand for water is expected to rise by at least 24 million litres a day in Oxfordshire, according to the SOS experts. This is about average for the south east of England. By increasing metering, pressure reduction, improved leakage control, increasing water charges and continuing publicity campaigns to save water, this demand could be supplied from existing resources during average conditions. Dry weather and prolonged drought will increasingly stress the resources and require more stringent measures, such as restricting non-essential uses (e.g. garden watering). Water rationing is both disruptive and expensive and it is inevitable that new sources of water will have to be developed to provide for dry periods. It seems inevitable that water will become ever more expensive, both for supply and for waste water removal.
- River flows - Under average conditions, the difference annually between rainfall, evaporation and abstraction ensures an adequate flow in the Thames and the River Thame. Dry weather during the summer decreases the difference to cause reductions in flows and less water to be available to the soil and ground water stores. Drought exacerbates these conditions, especially when it extends over the winter, or several winters, such as occurred in the Thame area between 2010 and 2012. Over a 10-year period these conditions may be expected to apply during one to three years.
- Heavy rainfall - Equally, above average winter rainfall (as in 2013/14) increases flows in the Thames and its tributary the Thame, raises soil water contents and increases ground water levels. When intense and localised storms occur, such as in summer, flooding follows, especially where the soil is so dry that the rain runs off before it soaks through. This is when the effective maintenance of ditches and streams becomes all-important; when this maintenance is neglected, through budget cuts or plain neglect, the water will run over roads, paths and anywhere it can find a path. Porous surfaces will aid the infiltration of water, reducing flash flooding and increasing the recharge of the soils and groundwater. (See also 'Flood prevention' below as to the additional need to slow down river flows - as opposed to overflows.)
- Changing weather patterns - Whatever the cause of climate change, whether man-made as a result of increased greenhouse gases or by natural events such as El Nino on the other side of the world (or a combination of causes), Britain has been experiencing extremes of weather. The scientific consensus is that we are likely to see higher intensity rainfall in the future. Old probabilities of a 1 in 100 years or even 10 years can now be expected to occur more frequently. We now need to plan for extremes as being highly possible - and potentially very sudden.
- Flood prevention - Preventing flooding in Oxfordshire is the responsibility of Oxfordshire County Council and the Environment Agency through work undertaken on river courses, streams and drains, such as the construction of embankments and employing barriers. The impact of flooding can be reduced by slowing down the movement of flood water by making channels more sinuous, and by recreating wetlands, whereas over-dredging and straightening water courses can have the opposite effect. There are also significant areas subject to local floods from poor water drainage (especially in clay bed areas) or from sewers or other areas where the unwanted water cannot drain away. These continue to be key planning (and enforcement) issues.

2.5 The Built Environment

- The effect of development - Increased development, residential or commercial, reduces the ability of the earth to absorb rainfall. Roofs and downspouts channel the rain into ever-smaller areas. The position is much worse where paved areas are extensive - a common issue in towns such as Thame. The increase in garden patios and paved front drives built in what was previously open farmland has greatly magnified this problem, with the potential to cause flash floods in new areas as excessive rainfall seeks a new course.
- Compliance - It is essential therefore that planners are able not only to scrutinise development plans closely to allow for current and future flood projections, but also to take steps to ensure compliance by developers keen to complete and sell their properties and move on.

2.6 The River Thame And The Cuttle Brook

- The River Thame catchment area - This is 682 km2 with 340km length of waterway, and a population of 183,000 (at present).
- The River Thame Conservation Trust (RTCT) - The Trust aims to work with local people in rural and urban parts of the catchment - volunteers, farmers and landowners - to improve biodiversity of the River Thame watercourses and to improve public understanding, appreciation and enjoyment of the river and its wildlife. RTCT and its volunteers work on the main river, its tributaries, headwaters and the small areas of ponds, ditches and flushes. In terms of wildlife benefit, the smaller freshwater areas play an important role in the biodiversity of the catchment. Vital Riverfly census work is carried out by the Trust to monitor the health of invertebrates and fish in the river, the key indicators of the health of the waterway.
- Improving water quality - This is the cornerstone of the RTCT's work - on which virtually every aspect of wildlife success and biodiversity depends . The Trust is setting in place comprehensive coverage of chemical and biological monitoring across the catchment through citizen science. By capturing both gradual changes and 'one off' pollution incidents that may not be picked up by the Environment Agency or Thames Water's own monitoring, it can aid mitigation and influence spend on sewage treatment works over time.
- Sewage treatment works - The River Thame has one of the highest concentrations of STWs (sewage treatment works) in the River Thames catchment areas. The RTCT considers that water quality in the river is still poor, but this is not regarded as 'pollution' within the limits that the Environment Agency sets for Thames Water. Whilst the Thame is recovering since the major STW incidents (and it is reported that significant improvements have been made to STWs) RTCT remains concerned with how TW will cope with demand from all the new building in Aylesbury, Haddenham and Thame.
- Access to the River Thame - Access for residents, walkers etc is limited, as much of the surrounding farmland is private with very few public footpaths. Those paths that do exist are naturally very muddy and wet at times. There is no 'right to roam' in lowland areas and landowners are reluctant to permit footpaths where none have existed before. This makes the ideal of a River Thame Path linked to Thame a challenge for the foreseeable future. There does seem to be opportunity now for increased access to the section of the Cuttle Brook as it flows across the flood plain (partly TTC owned) to join with the River Thame between the rear of the Renaissance Development and the new Thame Meadow (site F) development (see 1.3 above.) This extension should improve the environment of the town and benefit wildlife in all its forms.

2.7 Overall Issues

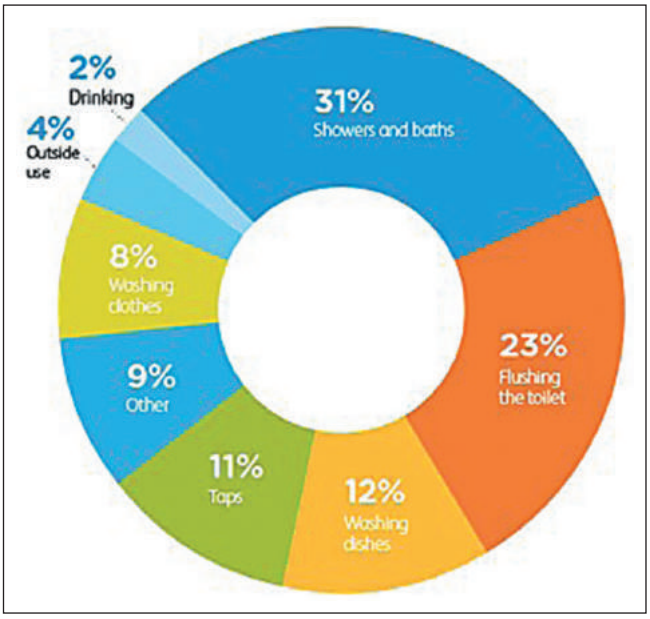
Water Resources generally

In the light of the above, the South Oxfordshire Sustainability group's water experts (see 2.3 above) recently wrote that, while there is no one simple solution to the county's water problems, a few basic principles should be followed:

- Adequate supply - All relevant authorities (e.g. County Council, the City and District Councils, the Environment Agency and Thames Water) need to review the adequacy of the resource to meet future demand for domestic and industrial water over the next 50 years for both the county and demands lower in the basin.
- Water saving - Everyone in Thame and future housing and industrial developments should be encouraged to adopt water saving measures, including water harvesting, grey water use and low use appliances. The graphic below shows typical household usage and the panel above lists some useful pointers for good practice and water saving .

Good Practice Pointers

- Turn off the water while brushing your teeth.
- Take shorter showers, and baths with less water.
- Use low flush or double flush toilets or composting toilets.
- Collect and then use water from a rain barrel.
- Use grey water for indoor plants as well as gardens and planters.
- Rinse hand washed dishes in a basin rather than under running water, then use the grey water.
- Pack your own water.
- Do not buy bottled water unless there is a town 'boil' order.
- Car washes use less water than hosing down your car. Rain is even better.
- Mulch garden beds.
- Run the dishwasher only when full.
- Use a soaker hose instead of a sprinkler.
- Get an aerator for your tap.
- Check for chemical ingredients in fertilizers.
- Use an Energy Star dishwasher or washing machine.
- Think twice about investments with organisations that consider water to be a 'commodity'.
- Make a conscious effort to conserve water.



Typical household water use (from TW website)

- Water storage - Strenuous efforts are needed to increase the natural water storage in the River Thames and River Thame basin (such as wetlands, SUDS (drainage systems - see definitions above) and farm reservoirs). Future GLP revisions and Thame Neighbourhood Plans should work with the EA and TW to establish ways to slow the flow of water and increase the storage capacity of the water network. The future maintenance of these features is also an important issue.
- Reduced pollution - It is important to recognise that the future is likely to bring substantial water quality problems as increasing volumes of water are reused and new pollutants, with unknown health effects, emerge. Water quality is of the highest importance to both people and wildlife.

2.8 Specific Issues For Thame

The Water and Drainage challenges to Thame are natural flooding of both the River Thame and the Cuttle Brook and minimising surface water run-off in urban areas by improved measures that residents and commercial & industrial businesses can employ. Climate change is likely to result in unexpectedly high rainfall events at some times and drought events at others.

- Urban drainage - While the use of ponds, swales and permeable paving is well established in the town's larger developments, householders need to understand the water drainage problems caused by paving gardens to provide parking spaces and garden reduction caused by putting down patios. There is also the need to contain and store water in water butts to reduce run-off or provide water supplies in time of drought. Residents can also be encouraged to create 'rain gardens' in wetter parts of their gardens and plant vegetation which is chosen for its ability to cope with occasional floods and then return the water to the air. As well as having other environmental benefits, trees consume great quantities of water, so that more planting of trees and shrubs in gardens and the town's open spaces should be encouraged in areas liable to flooding.

- Flooding Strategy - It would be helpful to seek ways in which the relevant authorities, including TTC, might work more closely with the EA and TW to smooth the effects of flooding and encourage community and individual action to minimise their impacts on the town and surrounding countryside. Watercourses move over time and both planting and better mapping of flood prone areas are essential, especially for areas considered for future housing and commercial development.
- TTC support for voluntary bodies - Thame is particularly fortunate to have both the Cuttle Brook Conservation Volunteers and the RTCT working in or alongside the boundary of the town. Close co-ordination with these and other local bodies will be necessary if there is to be effective engagement with Thames Water or the EA on such issues as flooding mitigation, sewage works issues etc. It can also encourage residents with countryside management interests and skills to help in the work of both. The Cuttle Brook and Reserve provide the key wildlife corridor from the River Thame to the countryside to the east of the town and up to the foot of the Chilterns.
- Information and encouragement to households - It would be helpful to have readily available information leaflets, and a section on TTC or a future GLP website, devoted to water saving advice and greater water awareness - similar to the Change for Chesham literature on 'Reducing rainwater runoff from your property' and 'Helping communities get wise to flooding'. A substantial amount of water is lost through leakage in the home, with leaking toilets a particular problem. Smart water metering helps identify leaks and householders can benefit from advice on both leaks and general water use.
- Yellow Fish - 'Only rain goes down the drain.' Thame should consider following Watlington (and other towns and cities across the UK) and adopt the Yellow Fish campaign. Supported by the EA, the initiative encourages citizens to pour nothing other than water down domestic, industrial and roadway drains. Stickers showing the Yellow Fish are distributed with flyers to every property to encourage a reduction in surface water pollution - vital for Thame to keep good water quality in the Cuttle Brook and the River Thame.
- Public water fountains - The national campaign to reduce the usage of plastic water bottles has encouraged many boroughs and businesses to install public water fountains. The TTC and TW should consider installing fountains in the centre of town and in parks and other public spaces.

2.9 Some Practical Ideas For Action

- Planning
  - Resist - all planning applications in local flood plain areas or which might increase flooding risks
  - Monitor - all planning applications to take account of the likely extra water demand and urban drainage issues
- Water quality and saving
  - Encourage - all new developments to include water saving measures such as water harvesting, grey water use, and low water appliances
  - Raise awareness - of ways and encourage individual action to promote water quality and reduce water consumption (see panel above)
  - Promote - better information and Yellow Fish campaign
- Rivers and streams
  - Seek to improve - public access along the banks of the River Thame to increase amenity value
  - Continue to support - through TTC and residents - the work of the Cuttle Brook Conservation Volunteers and River Thame Conservation Trust

3. Air & Environment - avoiding pollution (Grey)

This section relates to the environment in which we spend our daily lives, which directly affects our health and well-being. While overall weather and similar patterns are shaped by broader factors outside our immediate control, there is much we can and need to do locally just to protect our quality of life. If we don't do this, we are liable to suffer reduced air quality, more noise, illness, depleted wildlife, excessive illumination and impoverished soil.

Additional abbreviations used in this section:

BBOWT - Berks, Bucks & Oxon Wildlife Trust

CPRE - Campaign for the Protection of Rural England

NICE - National Institute for Health & Care Excellence

OxLEP - Oxfordshire Local Enterprise Partnership

RSPB - Royal Society for the Protection of Birds

WHO - World Health Organisation

3.1 Air Quality And Pollution - The International and National Position

- What is air pollution? - Air pollution is contamination of the air that is offensive or harmful to humans, animal or plant life. Its causes are wide-ranging, and many are within our control.
- What has changed? The old problem of London 'pea-soupers' that blotted out the sky for days and killed many people is now with us in a different and less visible form. While we may be able to see potholes in our roads or plastic rubbish in our oceans, and understand what damage they can cause, we cannot readily see the pollutants in the air, and tend to disregard their effects. Yet every day we breathe in particles that we cannot see, touch or feel which progressively poison us and pass through our bodies to attack our inner workings.
- The worldwide issue - Air pollution is an acknowledged worldwide problem, with many countries participating at international level in initiatives. Although inter-related with broader climate change, air pollution can have specific and local causes which need to be addressed locally. Air pollution is also more immediate in its causes and effects. A major concern now is black carbon emissions, mainly from the transport sector, which includes lorries and shipping[20], and from diesel engines in all economic sectors. The science on the issue is technical and requires a more precise analysis than is appropriate for the GLP, and the comments below seek to reflect the view of various significant bodies rather than a first-hand analysis.

3.2 Why Does Air Pollution Matter?

- Today's air pollutants - include nitrogen dioxide, sulphur dioxide, metals, and especially particulate matter known as black carbon 'which penetrate[s] deep into the lungs and into the cardiovascular system, posing the greatest risks to human health' (WHO.) WHO has also reported that 'Dozens of British cities are breaching air pollution limits, leading to thousands of premature deaths of the youngest, oldest and poorest in society….'.
- Particulates from diesel engines - are now especially a major cause for concern. The Government's own estimates echo the NICE figure[21] of 50,000 premature deaths annually from air pollution, with £27.5bn in costs every year. The issue was called a 'public health emergency' by MPs in April 2016 after a successful High Court case against the Government for failing to address illegal levels of air pollution. With much pollution there can be measurement to see whether pollution has exceeded 'safe' levels, but with particulates there is no 'safe' level at all.
- Who is at risk? - Air pollution can harm anyone; it is especially problematic for certain groups, such as:
  - children generally, as their respiratory organs are still developing.
  - asthma sufferers and those prone to asthma; and
  - older people living near roads with heavy traffic (where some tests have indicated a possible link to dementia[22]).
- **Car drivers - should not believe that air pollution affects only pedestrians. In fact, research indicates that drivers in heavy traffic can suffer many times greater levels of pollution than pedestrians walking nearby. It is in drivers' own interests, as well as that of other road users, not to use their cars more than necessary, and then in as non-polluting a way as possible.**

3.2 Air Quality And Pollution - The Position in Oxfordshire and Locally

- SODC study - Despite being largely rural, South Oxfordshire is not immune, and the position risks getting much worse with increased housing and commuting. SODC commissioned a study last year into air quality with a focus on known 'black spots'

in Watlington, Wallingford and Henley. Further information is becoming available all the time.

- NICE guidelines[23] ('Air pollution: outdoor air quality and health') - These state unequivocally the need to ensure that Local Plans provide appropriate policies to reduce risks to air quality, with suggested planning guidance in the absence of appropriate policies. The guidelines stress the importance of including air pollution in 'plan making' by all tiers of local government in line with the NPPF. In the absence of effective measures in Local Plans, the guidelines advocate developing local guidance, e.g. through supplementary planning documents. The careful siting of buildings away from busy roads, and especially buildings for 'vulnerable groups such as children and the elderly', is also stressed.
- Local planning guidance - This requires developers to minimise the impact of any development on air quality. In some cases an Air Quality Assessment will be required and, in special circumstances, an Air Quality Management Area (AQMA) may be designated. SODC's Corporate Plan 2016-2020[24] promises to deliver new and ambitious air quality action plans across the district and specifically to tackle poor air quality in Henley, Wallingford and Watlington.
- SOS response - The environment group South Oxfordshire Sustainability (SOS) believes the SODC proposals are inadequate and is encouraging more active campaigning.

3.3 Causes Of Air Pollution

- Diesel - While industry and other factors (see below) contribute to air pollution, the most pressing current concern in towns such as Thame is probably the impact of vehicle emissions. In particular, with lower CO2 emissions, reduced road tax and much greater fuel economy, diesel engines became much more popular, but at the expense of a major increase in dangerous particulates. The two pollutants of most concern are microscopic airborne particles, known as black carbon or particulate matter (PM), and nitrogen dioxide (NO2).
- Traffic calming - Some traffic calming measures, such as raised road sections, themselves create additional pollution, both from the slowing down and speeding up process and from brake lining shards. There does seem widespread agreement that traffic moving steadily at 20 mph is significantly less polluting than higher speeds and regular stop-starts.
- Schools - As more and more studies show, school sites attract the build-up of damaging air pollution from waiting vehicles at peak drop-off and pick-up times. This is an area where schools can help their pupils to stimulate awareness and help alleviate the effects on children, among the groups most likely to suffer long-term from air pollution. New schemes utilising safe routes principles are available to assist[25].

3.4 The Challenges For Thame

- Measuring pollution - As more focus is being given to air pollution, more attention is being given to effective measurement of the pollutants. Recent measurements have indicated pollution levels close to safety limits at certain times of the day in locations such as Park Street, the High Street crossing by the Town Hall and the Lower High Street[26]. Any significant action to alleviate the situation is likely to require unambiguous evidence as to the scale of pollution. It is therefore recommended that formal measurements are taken at significant points in and around the town over relevant periods of time to assess the position and how it is changing.
- Changing traffic patterns - While Thame does not currently experience the same level of traffic pollution as Henley, Wallingford and Watlington, there are already concerns over air pollution in the town. This is added to by slow-moving stop-start queuing traffic and idling engines (including buses) at peak periods along busy and narrow streets, including the High Street, and on roads approaching congested roundabouts. It is recommended that appropriate surveys are carried out to check the position statistically. These surveys should also take into account not just a 24-hour spread but the impact of peak periods, such as rush hour and school gates drop-off and pick-up times.
- Population growth and traffic flows - As the town grows and more is built on outlying areas, there will be more cars and more traffic, with new housing adding to the population in near direct proportion. As traffic builds up on the perimeter roundabouts, more people 'cut through' the centre. In addition, as housing is built in the area and Thame's facilities continue to improve, Thame will be seen as a good place for those in outlying areas to come to shop, eat and drink, all of which adds further traffic. The result is that, although the air quality is still largely good in and around the town centre, it will inevitably get worse - and potentially seriously polluted - if current trends continue and nothing is done to alleviate the position.
- Parking - balancing the needs - Thame's town centre is rightly regarded as vital for the town's vibrancy and general success and requires adequate parking within close range of the shops and other facilities. But the parking process itself generates many small vehicle movements, which are polluting in themselves. The position is exacerbated by a) holding up passing traffic while someone parks and b) engine idling while waiting. In the interest of our environment and health, therefore, parking is logically best placed off, but closely accessible to, the main High Street shopping areas.

3.5 What Action Can We Take Locally?

Many of the proposals below are included in the NICE recommendations, and/or have been adopted elsewhere, including Oxford itself

- Reduction in car use - The first step for everyone is to consider reducing car use. Do I really need the car for this? Can I walk, cycle, catch the bus or even car share, for which specialist websites now exist. The choice not to use the car is greatly helped by having safe and attractive walking and cycling alternatives, as highlighted elsewhere in this plan[27].
- Traffic management - Even if its current position is less serious than it might be, Thame will soon have significant air quality problem if things continue as they are. Moreover, that problem will be most serious in the High Street, the very place which the town sees as the centre of its activities and vibrancy but which will, if unprotected, be likely to become the most polluted. Plans should be made now to address this as part of the new infrastructure planning.
- Buses - There are two aspects here. While Oxford is improving its fleet, many of the buses that travel through Thame still appear to be highly polluting. Representations should be made to improve this. In addition, with an ageing population and limited mobility, a hopper bus or similar is becoming not just useful but an essential service for those less able to get out and about.
- Traffic speeds - Engine pollution is reduced at lower and steady speeds, supported by 20 mph zones and measures to encourage a steady flow of traffic, so far as possible channelling stops and starts away from the main shopping and leisure areas.
- No idling zones - Unnecessary stationary idling is a criminal offence under Section 42 of the Road Traffic Act 1988. No idling zones can reinforce this general prohibition by making it illegal to leave the vehicle engine running when stationary in specified areas. This objective would be supported voluntarily by a vigorous community-supported campaign, such as a local 'Clean Air' day, emphasising the importance of the issue. Oxford City Council and Friends of the Earth have already produced leaflets and stickers encouraging motorists to turn off their idling engines. Thame should follow suit as part of a coordinated campaign for traffic in the town. Pressure should also be put on buses and other transport vehicles to do the same.
- Shared space streets/ car-free areas/ pedestrianisation - Thame could lend itself to a policy of shared space streets[28] or even pedestrianising the central section of the High Street during all or part of the day. This could dramatically reduce air pollution at a stroke, provided it made alternative traffic flows as attractive as possible and enabled accessible parking close to the High Street. Electrically-powered buses could be an exception, with commercial vehicle loading and unloading to shops etc carried out between limited hours.
- Safe pavements and pedestrian priority - A key aspect of all schemes should be ensuring the safety and well-being of pedestrians, which is also an essential requirement of encouraging people to walk more and drive less. Wider and level pavements free from unnecessary (and sometimes dangerous) street furniture should be priorities in key pedestrian routes into town.

- Parking - This is an associated issue, with many reasons to encourage parking off, but closely accessible to, the High Street.
- Electric cars - Diesel engines have been heavily criticised in recent years. Sales of diesel cars have declined, but the positive benefits of having less diesel pollution may result in more CO2 emissions from the switch back to petrol engines. It appears as if electric cars are on the point of becoming more widely used, but at present, there are issues to do with affordability, limited range and the requirement for easy access to fast charging facilities. If more public parking bays are to be equipped with charging points, this will have an impact upon the availability of spaces for conventional cars. This issue is further addressed in section 4 (Energy & Energy Efficiency).
- Schools - Parents of schoolchildren can help by keeping school journeys as pollution-free as possible. Measurement of pollution levels on the main routes to school and at school gates can be taken, which might indicate the immediacy of the need for change. Actions could include a mix of:
    - considering alternative places to park for drop-off and pick-up - away from the main areas where people congregate; (possibly with a suitable indoor waiting area for parents to encourage them to leave their cars;)
    - collecting children on foot;
    - healthier and safer walking and cycling routes to school;
    - ensuring that all children have ready access to 'Bikeability' training[29];
    - more tree planting to absorb pollution; and
    - good quality information to parents, encouraged by the children themselves.
- Residences and care homes - As far as practicable these should be sited away from roads with heavy traffic or queuing traffic, and the planning authority should be encouraged to take proper recognition of guidance in this respect by refusing applications for unsuitable locations.

- Tree and vegetation planting of suitable species alongside congested roads is known to reduce pollution by leaf growth absorbing pollutants. Although tree planting entails some cost and maintenance, it has many ecological, aesthetic and environmental, in addition to health, benefits.

3.6 Indoor Pollution

- A 2016 report from the Royal College of Physicians and the Royal College of Pediatrics and Child Health[30] ('Every breath we take: the lifelong impact of air pollution'), highlights the less understood impact of indoor pollution, as well as the growing evidence of harm to children's health and intelligence. Sources of indoor air pollution include smoking, faulty boilers, gas cookers and heaters, as well as irritant chemicals from new furniture, air fresheners and household cleaning products. House- dust mites, mould and dander from pets can also damage health, according to the report.
- It is recognised that these indoor pollutants are largely a matter for householders to deal with, and not for the community. Better awareness and viable alternatives could however help to prevent unnecessary damage and suffering.

3.7 Light Pollution

- 'Light blight' is increasingly recognised for its detrimental impact on wildlife and humans. Amongst others, the CPRE and the British Astronomical Association have campaigned on the subject, and international scientific organisations have sounded warning signals about it. Disruption of sleep is a concern, as is the impact on eco-systems. Better design and control of outdoor lighting is required in order to address the issues, with suitable monitoring of light levels. Better lighting control also reduces unnecessary energy use.
- In 2010, CPRE and the British Astronomical Association's Commission for Dark Skies ran a survey to find out how people's lives are affected by light pollution. Almost 1,400 people took part and the survey revealed that the main causes of light nuisance are road lighting (89%), domestic security lighting (79%), street lights that are more than five years old (77%), businesses (56%), sports grounds (53%) and supermarkets (41%). Almost two-thirds of the light pollution came from a source with an established lighting scheme (65%) such as a development that has been in place for some time. A total 82% of respondents said that the offending lights were left on all night.
- The legal position - Under s 102 of the Clean Neighbourhoods and Environment Act (2005) exterior lighting joins noise and smells on the list of things that can be treated as a statutory nuisance on which local councils' Environmental Health Departments can take legal action.
    - 'Exterior light emitted from premises [that becomes] prejudicial to health or a nuisance' is a criminal offence.
    - The law deals only with incidents of particularly bad lighting from some types of premises which cause people real nuisance.
    - CPRE would like to see the law used more, to raise awareness of the issue and to help people who really are suffering from severe light pollution.
- Light pollution may not currently be seen as a priority as far as the Green Living Plan is concerned but is something that does very much concern some people. As various devices are developed it is likely to affect more people but hopefully new technology will also enable it to be managed more effectively. As the GLP evolves the issue may become more relevant and should lead to initiatives to reduce light pollution, as with street lighting using lower energy and impact sources and methods (see the following section on alternative energies). It is suggested that potential light pollution be a material factor to be considered by TTC from a green living perspective in reviewing any planning applications and any concerns passed on to SODC with other observations.

3.8 Noise Pollution

- Noise - Noise is an inevitable part of modern living, but noise pollution is an undesired level of noise that can cause harm or distress to people, animals or other natural life. To some extent the issue can be subjective, and some who create noise have no idea of the level of stress they cause. But the community can play its part in identifying unacceptable levels and, where appropriate, applying pressure to control these.
- The Environmental Protection Act 1990 is the main reference point; local authorities can issue noise

abatement notices (or even ASBOs) if they believe that unacceptable levels of noise are being created[31]. A private action for nuisance is available but little used.

- Typical noise issues may relate to some of the following:
  - Building works, especially pile-driving, drilling or use of other heavy machinery
  - Bird-scarers and clay pigeon shooting;
  - Vehicle traffic generally, including highly-intrusive motorcycle engines;
  - Aeroplanes, aerial stunt flying and, notably, helicopters flying over towns;
  - Certain garden machinery;
  - Loud radios or music; and
  - Anti-social behaviour.
- Traffic noise - Taking local action on traffic noise from major roads is problematical, but it is possible to seek 20 mph zones in residential areas. These have become the norm in parts of London and other cities, including Oxford, combining noise and pollution control in one measure. Conditions in planning permissions can also include restrictions to traffic movements or deliveries to businesses and construction sites.
- Night time noise - A Local Authority can apply the provisions of the Noise Act 1996. It must take reasonable steps to investigate complaints of noise from dwellings or licensed premises between 11pm and 7am.
- Quiet zones - There are occasions when we want somewhere outdoors where we can be confident that peace and serenity will be available. Such 'havens' should be made available and built into our broader urban landscape. Paragraph 123 of the NPPF will permit protection of areas of tranquillity 'which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.'

3.9 Some Practical Ideas For Action

- NPPF and new Local Plan - review new plan against national framework strategies and actions - seek change where necessary.
- Monitoring - monitor and model pollution levels at key places, areas and times.
- Information - distil third party information and experience elsewhere to provide reliable information readily available and updated - set up public meeting with appropriate experts to develop understanding
- Stimulate debate - over importance of air quality and means available to avoid injury - involve local medical practitioners and health care professionals
- Influence - genuine more active consideration of issue at all levels of planning and importance of air quality in relation to Thame Travel/ Transport Plan
- Balance - town growth and vibrancy against need for personal health and vitality
- Campaign- develop consistent clean air campaign around High Street, including e.g.:
  - One or more clean air days in (and around) Thame
  - Fact sheets, stickers and leaflets to raise awareness of issue and consequences
  - Encourage and ultimately enforce no-idling laws
  - Encourage viable options for motorists
  - Promote 20 mph areas and the benefits
  - Promote advantages of off-street parking
  - Improve alterative non-vehicle means of accessing town centre (see Green area)
- Schools - Contact (directly or via staff) school management and governing bodies
  - Review monitoring at school gates
  - Raise consciousness at parent and student level
  - Promote active 'turn off your engine' awareness
  - Consider alternatives for busy parents (e.g. spare room with basic facilities)
  - Improve cycling possibilities and other safe routes to school
  - Improve tree planting on site
- Support - wider study of air quality, electric vehicle use, and asthma research
- Individual actions - e.g. reduce car use where possible, moderate driving, etc.
- Redress - identify and publicise action that can be taken (and liaise with CAB etc.)
- Light pollution - promote awareness and CPRE guidance relevance to planning decisions
- Noise pollution - develop policy and approach to minimising and seeking redress

4. Energy & Energy Efficiency (Red)

This section considers how we use, capture and manage energy. It primarily considers electrical energy, including for electric vehicles; future versions of the Plan should be broadened to include gas, heat , hydrogen etc. The approach below seeks to develop the following list of high-level aims[32]:

- AIM-1: awareness - promote greater understanding of energy use in homes, businesses and for transport and encourage the up-take of new technologies and innovative energy services to deliver benefits at personal and community levels;
- AIM-2: sustainability - commit to reduce carbon and other emissions to address climate change and reduce air pollution, including a switch to greater use of renewable energy sources for homes, businesses and transport; and
- AIM-3: efficiency - encourage individuals and businesses to use new technologies to monitor/ manage energy use and promote energy efficiency to bring cost and environmental benefits.

These aims will work alongside other long-term benefits under this GLP in producing improved air quality and a better environment for Thame. There can also be direct short-term benefits for everyone in the community if we are more active in the way we use energy. For example, new technologies bring opportunities for greater automation, creating benefits effortlessly. Examples for improved cost-effectiveness and attractive new services to customers include automation in homes and office buildings, and the 'smart charging' of electric vehicles. Energy is a topic that interests many people with much to be learned from all parties. Later in this section we describe a two-stage approach for developing community-scale projects that will equip Thame to develop in a sustainable manner.

Key challenges include: the cost-effective use of energy, electric vehicles, and reducing carbon emissions. Engagement with the local community, both individuals and businesses, will be a priority in addressing these.

Additional abbreviations used in this section:

COP - United Nations Conference of Parties

EV- Electric Vehicles

PV - Photo Voltaic (solar panel)

R&D - Research and Development

4.1 Why Do We Need To Change?

There are three main reasons why we need to change our present approach to energy:

- Sustainability - The source of much of the energy we use today (for transport, heating, lighting and entertainment) comes from fossil fuels such as coal, oil and natural gas. Burning these fuels, whether in homes, petrol/diesel cars, businesses or in power stations, produces carbon dioxide and other gases that contaminate our atmosphere, contributing to the 'greenhouse effect' that contributes to climate change.
- Fossil fuels are a finite resource - These sources were laid down millions of years ago and are irreplaceable. Arguably, gas and oil are too valuable to simply burn, being complex chemical compounds that would be better utilised for making such things as fertilisers, synthetic materials, and lubricants. When they become scarce this will be reflected in high market prices, driving up costs (or lowering living standards) for everyone. It makes sense to utilise the alternatives to fossil fuels that are now becoming available and to do this in good time.
- New energy systems - Renewables are different in character to traditional power sources and require a different approach at personal and community level. For example, traditional sources have been large and centralised (i.e. big and remote power stations), but renewable energy is best harnessed in a decentralised way (solar panels are a 'power station on your roof'). Another significant difference is that conventional fossil power plants are controllable, but renewable sources only generate power when, for example, the wind blows or the sun shines. For renewables to be utilised cost-effectively it will be important for our use of energy to be more informed - for example, making use of automation to routinely check for us and make best use of energy when it is abundant (and cheap), or to call on storage when it is scarce (and expensive). There is much we can learn in this area, both from the UK and internationally, and the GLP seeks to build understanding of the new opportunities for local people and businesses in Thame.

4.2 How Do We Approach Change? - A Two-Stage Approach To Energy Projects

- Much is changing is the field of energy, and there is a great deal we can learn from developments elsewhere, nationally and internationally. There are also valuable lessons from Community Energy schemes, where groups of people are coming together to generate, own, manage, or reduce consumption of energy, with the aim of saving local people money and creating a

greener environment. These are discussed further at the end of the section.

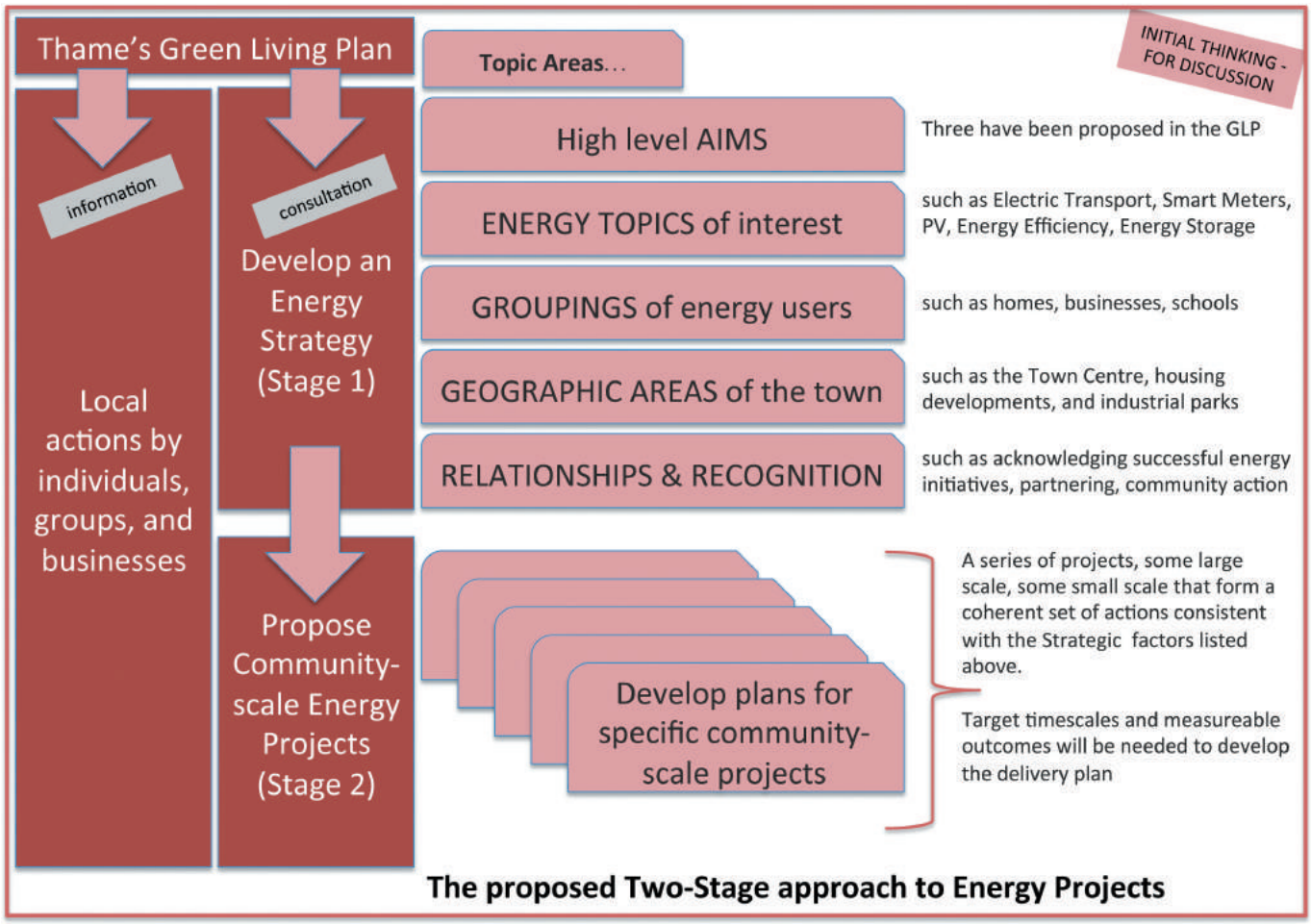
- A two-stage approach for developing community-scale proposals will enable a broader discussion with the local community and ensure coherent developments. The stages are:
  - Stage 1: develop an energy strategy - including confirmation of the high-level Aims
  - Stage 2: propose specific community-scale projects aligning with that strategy

In practice these two stages can be progressed in parallel provided that both remain consistent and the community-scale projects continue to align with the strategy. While community-scale projects are being developed, smaller scale actions at the level of individuals, groups, households and businesses, can commence immediately - these will be informed and inspired by the GLP and the communications activities that support it.

This approach is represented in the following diagram and explained further below:

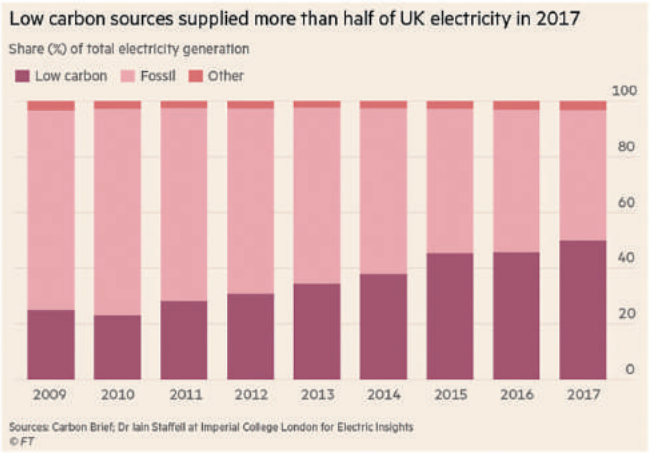
4.3 Energy - The International, National & Local Position

- Internationally attention is mainly focused on:
  - the impact on our planet of burning oil, gas and coal (climate change and air quality).
  - the use of renewable energy (including hydro power, tidal power, geothermal power, solar power, wind power, and hydrogen systems).
  - the development of energy storage at local and regional scale, to help manage the intermittency of renewable sources and the peaks of power demand.
  - the use of 'smart technologies' to manage energy more effectively.
  - keeping energy as reliable and as affordable as possible as we all depend so much on it.



The diagram shows two strands of activity on the left side, the Local Actions that are intended to be encouraged by provision of information, and the Two Stage approach to developing community scale projects. The boxes on the right provide examples of the developments shown as Stage 1 and Stage 2.

- Nationally there is much happening, including the government's commitment to offer the installation of 'smart meters' in all homes by 2020. With many initiatives originating through the European Union, we will have to wait to see what policy changes may occur with Brexit. Meanwhile there are encouraging signs of continuing national commitment to de-carbonisation, such as:
  - the Climate Change Act 2008 that contains legally binding targets.
  - the continuing role of the official advisory Committee on Climate Change (CCC).
  - Britain's ratification of international climate agreements through the UN COP process.
  - the government's Smart, Flexible Energy plan, published in July 2017.
  - the government's Clean Growth Strategy published in October 2017.
  - The mix of energy sources is starting to change significantly in Britain. For example, by 2017 renewables provided some 29% of our total electrical energy, and as the diagram below[33] shows, when other low carbon sources such as nuclear power are included, more than half of the national electrical energy in 2017 came from low carbon sources.



  - It is important to note that data for energy refers to electricity supplied over a period of time, in this case a year. Our national energy system must also match supply and demand at every instant in time, so enough power capacity must always be available, including when sun or wind conditions are such that renewable sources have reduced or zero output.
- Locally - In Oxfordshire there are active developments to encourage energy efficiency and promote renewable energy. These include responses to UK Building Regulations and the work of Community Action Groups (CAGs), and the Low Carbon Hub in Oxford. The CAG network links some 60 groups across the county (including 21st Century Thame) and supports local projects for energy efficiency and decarbonisation. The Low Carbon Hub (a 'pioneering social enterprise') works to achieve more renewable energy, helping to provide funding for local energy projects, and bringing a focus that benefits local communities.

4.4 Developing An Energy Strategy For Thame

- What's the purpose of an Energy Strategy? A strategy sets out a long-term direction of thinking, with broad aims and what's important about them. It's a great starting point for moving forward. Once developed through consultation and analysis, it will be easier to evaluate ideas for specific projects, filter them, prioritise them and identify gaps.
- How does this link to the Thame Neighbourhood Plan? The TNP refers to 'encouraging reduction in energy and water use', 'energy efficiency' and 'encouraging energy efficient and sustainable development'. These broad statements need to be developed if meaningful action is to be taken. An Energy Strategy will help provide this.
- What might an Energy Strategy for Thame include?
  - Increase awareness and community involvement in energy - to give local people a greater sense of ownership, understanding, and potential benefits from renewable energy, energy efficiency, and energy flexibility - such as information, ideas, links to specialists, and references to successful projects elsewhere.
  - Promote and facilitate the use of renewable energy locally - including assisting the take-up of electric transport such as bicycles, cars, vans and buses.
  - Increase local control over energy costs - for residents, businesses and public services (hopefully also reducing the number of households in fuel poverty).
  - Explore energy investment options - through local energy schemes or community-funded energy projects - with the aim of retaining the economic benefits locally - to keep money and jobs in the area.
  - Partnering schemes - where there are common interests in energy matters, e.g. closer links between local businesses and citizens, giving recognition to those who show leadership and lift standards in energy efficiency, sustainability, and support to vulnerable customers.
  - Raise Thame's 'green' profile in energy - as a town visibly forward-thinking in energy.

In developing the topics within the Energy Strategy it will be important to take views from across the community and understand how various parties might contribute to measurable outcomes and target timescales.

4.5 Creating The Delivery Plan For Community-Scale Projects

- Seeking consensus - These plans will require a substantial consensus in Thame to which the following might contribute:

- Engage and inform: take views and raise awareness with residents and businesses; consider possible alternative energy opportunities; develop inspirational presentations and informative discussions for use with local groups. Invite speakers from energy projects in the local area.
- Publish and promote: publicise the GLP and relevant material from other communities, institutions etc., including use of websites, a stand at local events, news media, and social media.
- Local action group: consider encouraging a Thame energy action group (there are good examples nearby) to raise awareness, promote local actions and feed back to the developing Energy Strategy.

- Learning by doing. Ideas will be sparked as people see and hear about practical projects.
  - Promote small-scale action: examples - a 'smart' approach to managing demand; encouraging awareness and behaviour change; energy automation and smart phone Apps; insulation and efficient heating/cooling installations.
  - Generate Clean Energy Locally: increase the production of low carbon energy at residential, community and business sites, building a sense of community ownership, including the possibility of crowd-funding for investments.
  - Create Energy Services: see how to create new value by 'flexing' demand and trading surplus energy generated locally.
  - Develop flagship projects: develop practical high-profile initiatives as visible signs of Thame's forward thinking in energy. These can be large or small - but should be visible demonstrations of Thame's ambitions, such as:
    - initiatives that promote energy efficiency;
    - electric vehicle charging points in car parks and, say, in street lamp columns;
    - PV solar panels on high-profile buildings or new developments;
    - 'solar arrays' in nearby fields, possibly via crowd-funding and profit-sharing mechanisms;
    - information displays that report Thame's current generation, storage and demand;
    - community energy storage linked to a solar array;
    - a community heating project that generates hot water and electricity, with surplus energy 'traded' directly between people in the town.

4.6 Supporting A Delivery Plan

- What national developments may assist? The GB energy market is in active transition with renewable generation and energy management now big business. Relevant government departments and the Regulator (Ofgem) promote 'energy flexibility' and linkages between electricity and areas such as Heat, Hydrogen, Transport, the Internet of Things, and Smart Cities.
- The role of building standards. Work on the codes and standards that apply to new homes is led by MHCLG (Ministry of Housing, Communities and Local Government). This is a complex area and initiatives have not always delivered the expected results. There is also a tendency for the government to relax some standards to encourage more house building.
- Use of Community Infrastructure Levy payments (CILs) paid by developers. Consider how these might be used to assist energy efficiency, clean transport or other sustainability projects that support homes and businesses in the local area.
- What is Community Energy? The Government claims to encourage 'Community Energy' - such as projects with community ownership, leadership or control - where the benefits stay in the local community[34].
- Communities and Energy. Energy increasingly focuses on communities because:
  - Scale: Much of our renewable energy resource potential is relatively small scale and dispersed, so lends itself to a community delivery approach.
  - Local value: More investment, revenue and job creation for a local area whilst reducing energy costs for residents, businesses and the public sector.
  - Local people: Local involvement in renewable energy and energy efficiency.
  - Young people: Involving more young people to create impetus for a new energy strategy for Thame - and encourage other generations.
  - New markets: New opportunities such as 'local markets' for selling and buying energy generated from PV roof panels, or stored in home batteries, or in electric vehicles.

4.7 Maintaining Progress

- Key parties to be involved. The support and active engagement of TTC will be key to help assemble a committed and informed group of people living and/or working in the town. Close engagement with existing groups, local businesses, and associations in the town will also be critical to success. A core group will be needed as activities grow in scale and breadth, and will require a communications campaign, web presence and social media, presentations, discussions and events.
- RSA resources. RSATG would explore connections with The RSA's active network in Oxfordshire, nationally and internationally to help make Thame's activities visible and learn from experiences elsewhere.
- Scanning the horizon for energy developments. As Thame moves forward it will be important to stay in touch with energy developments in the UK and internationally. There will not only be new technologies and new products emerging, but new service providers, and new opportunities arising from government policy incentives and investment programmes.

- Vehicle Charging points. Publicly accessible charging points are essential if the community is to support the uptake of electric cars. The Society of Motor Manufacturers and Traders reported in February 2017 that, despite the UK being the EU's biggest market for plug-in electric cars, their market share is still a fraction of the total car sales and that car buyers were deterred both by the initial purchase cost and the fear of not being able to find a working charging point. This also covers those who do not have off-road parking for their car and cannot readily charge their vehicle at home. There are many initiatives that can be seen elsewhere to introduce rapid chargers in car parks and garage forecourts, and provide standard chargers in lamp columns where off-street parking is restricted in residential areas. The picture here shows an example of lamp column charging, which can be installed in 30 minutes[35].

- Charging point practicalities - At a practical level it will be important to determine both the location and type of chargers that will serve users best. Rapid chargers, Fast chargers, and Slow chargers can each play a role and have different costs and site requirements. Thame's strategy will need to adapt to changing technologies, as on-going development can be expected for the coming years. Electric vehicle drivers may have quite differing requirements: for example visitors to the town are likely to have different requirements to local electric vehicle owners, especially those who do not have off-street parking. In the future there may also be a mix of those who own electric vehicles and those who are members of some form of car sharing club.

- Community Energy Initiatives. There are many examples of local energy initiatives across Britain. Thame could review, visit and consider replicating relevant aspects of these and gain valuable practical insights about setting up such arrangements. Some useful sources of information - and inspiration - are shown below. Note that when searching websites it is important to check that information is current as government schemes and sponsored initiatives are often for fixed periods and so time-out.
  - Community Energy England: http://hub.communityenergyengland.org
  - Community Energy Scotland: http://www.communityenergyscotland.org.uk
  - Community Energy Wales: http://communityenergywales.org.uk
  - The Low Carbon Hub, Oxford: https://www.lowcarbonhub.org
  - Energy4all Cooperatives: https://energy4all.co.uk
  - The Energy Savings Trust: http://www.energysavingtrust.org.uk
  - ACE, an EU collaboration: http://www.aceforcommunities.net

4.8 Some Practical Ideas For Action

- Energy efficiency - explore a range of opportunities such as:
  - establish a website that provides basic tips and suggestions
  - provide advice on understanding and making the most of smart meters
  - evaluate energy audit tools for base-lining and measurement of success going forward
  - consider options that may be helpful to households in fuel poverty
- Electric Vehicles (EVs) - provide facilities to promote the use of electric vehicles, such as:
  - Explore the wider use of e-bikes, linking with the Transport Plan and Phoenix trail
  - Consider provision of rapid EV charging facilities in Thame car parks
  - Explore options for EV street charging where off-road parking is limited
  - Investigate options for an EV car-sharing club
- Renewable energy - explore a range of initiatives, such as:

- Raise understanding about the local PV solar facilities and their benefits
- Encourage PV solar on the roof of larger buildings in Thame, where this is suitable
- Encourage availability of PV roofs for new housing as an option for home buyers
- Assess Thame as a 'trial location' for an energy initiative led by academia or a local business
- Explore a crowd-funded community energy project

- Consider creating a Thame Energy Company - Learn from other towns who have done this
- Develop an energy strategy for Thame - to bring coherency to local energy initiatives, recognising the rapid changes currently taking place in new technologies and services

5. Waste, Recycling & Waste Avoidance (Brown)

Additional abbreviations used in this section:

CAG - The Community Action Group network

RECOUP - Recycling of Used Plastics Limited

WEEE - Waste electronic & electrical equipment

5.1 Waste Generally

The evidence points to today's society being very wasteful. It has been reported[36] that a typical family in the UK gets rid annually of the equivalent of six trees, 1,000 cans, 440 plastic bottles, 330 glass bottles and jars, 210Kg. of avoidable food waste and 30 batteries. One option for policy makers is for landfill tax to be paid at an escalating annual rate for every tonne of landfill, so providing a serious financial incentive to reduce and recycle used materials. Alternative approaches might include public information campaigns and incentives schemes, such as bottle return charges.

Far too much packaging is also just thrown away in public places, creating an eyesore or worse. While it might be regarded as idealistic to believe that those involved would have more concern for the environment, less readily throw-away packaging might help to reduce the problem. One simple example is the throwing away of rubber bands, which birds can confuse with worms - with drastic results. Everyone can play their part by reducing their own waste and encouraging others where appropriate, including organisations, to understand the implications.

5.2 Packaging Waste

A pervasive element of waste is packaging, with many objects requiring protection against damage to the contents (stout cardboard, internal gussets, bubble-wrap etc.) or against degradation or contamination (e.g. many foodstuffs and drinks.) A small step in this process has been taken with the charge levied on plastic bags; re-useable coffee cups for take-away coffee also help. As well as its effect on our high streets, increased internet shopping often compounds the problem by substantial extra packaging.

5.3 Recycling Basics

Recycling is an increasingly valuable tool in reducing the waste going to limited landfill sites and providing re-useable materials, which in turn reduces the need for consuming finite resources[37]. But confusion arises in domestic recycling as to what can be recycled and how, and why properly prepared recycling is rejected at collection points as not being properly cleaned or being contaminated with food or similar waste[38]. This can result in many items not being re-cycled that could be[39].

Food waste - Left-over food is a special problem in landfill as it produces methane - a potent greenhouse gas. According to SODC figures (Outlook - Spring 2018) 30% of the contents of grey bins (general rubbish) was food waste, which can contaminate the whole load. For this reason, food waste should be put in the small green food waste bins to avoid contamination and permit recycling into fertiliser and electricity as a renewable resource (e.g. Agrivert see below.)

Plastic - Plastic creates particular confusion:

Plastic containers - People recognise that plastic bottles can be recycled but are not always sure about plastic items. Co-op research has suggested that only 10% of recyclable plastic is recycled (as against 45% of goods generally).

Other plastic - plastic film products, including carrier bags, pasta and rice bags, and the film on ready meals, came out worst in a Recoup survey with only about 3% believed to be recycled in 2015. This was largely because only 80 local authorities (20%) provided a recycling service for these materials[40].

Other products - Some plastic can be recycled into other products, such as work surfaces.

5.4 Practical Approaches

Food and drink containers - most can and should be recycled - but clarity is needed on how thoroughly they need to be washed;

Take-away coffee cups etc - Support and encouragement should be given to operations set up to recycle these and/or for re-useable containers (e.g. even with a Thame logo.)

Deposits - A deposit return system can capture over 90% of bottles and cans in the recycling economy[41]. It should be considered as to what extent deposit return systems may be suitable for Thame[42].

Dirty nappies - These contaminate food or other materials, leading to whole loads being rejected; they must be put in grey bins with normal household waste and not with food waste or recycling.

Wet wipes - These cause enormous problems in our drainage systems and are also causing problems in rivers. They need to be used sparingly and disposed of properly with ordinary rubbish.

Waste electronic & electrical equipment (WEEE) - It is estimated that only 45% of UK WEEE goods are recycled (with 80% of this going overseas[43]), so there is major scope for improvement in this area. Local action could help increase this percentage.

Repair and re-use - The CAG network actively supports local initiatives such as repair cafes and swap shops/ bike exchanges (as in Chinnor for example) which help to test, repair and recycle portable items which their owners no longer want. This has the dual benefit of avoiding or deferring waste and providing an opportunity for those with lower means to acquire valuable items that would otherwise be thrown away.

White goods (e.g. washing machines) - These are often treated as too bulky and/or too expensive to repair and are often jettisoned when they break down. There are however now some charities and possible community facilities that will take them, fuller details of which could usefully be made more widely available.

The start point with recycling must be a continuing effort to inform people how to use the system to its (rather than their) best advantage - and the difference this can make. Information should be readily available at or close to the point where the individual decision is made to recycle or not and how best to do so. This would certainly be helped by clearer marking; for example, many packages are unclear and others still state: 'not currently recycled'. Consistency between local authorities would also assist public understanding.

Encouragement - It would help to have positive publicity of the extent and success of recycling to encourage people to use the system fully and overcome the urban myths that everything goes into landfill. The current SODC 'Outlook' newspaper helps publicise this, but more could be done, including ideas targeted specifically at Thame.

Sponsorship - Local companies may be prepared to sponsor suitable initiatives mentioned above.

5.5 Reducing Waste And Packaging

A direct approach is to cut down on heavily pre-packaged goods and shop more for over-the-counter items where there is the least packaging, putting pressure on all involved to reduce packaging waste by re-examining and changing established practices.

An additional longer-term approach, needing broader collective action, is to press for:

- more plastic to be recycled locally;
- plastic and similar packaging on products to have clearer instructions; and
- readily available guidance[44] on how to deal with mixed products such as tape or staples on cardboard, plastic bottle tops, labels on jars etc.

5.6 Some Relevant Facilities

Windles - Windles is a Thame-based print and production company that prides itself on sustainable methods. It has devised and uses the LOOP-IT system to create, re-use or recover all the energy used within the boundaries of its business.

CAGs (Community Action Groups) - Oxfordshire County Council are involved in a group with £25,000 funding so that CAGs (e.g. Greening Chinnor and Sustainable Wallingford) can run repair and reuse activities (such as repair cafes) with a focus on increasing the repair of portable and personal electrical items.

Agrivert provides anaerobic digestion plants - such as at Crowmarsh near Wallingford, where food waste is broken down into methane and carbon dioxide to create both agricultural fertiliser and (via a plant at Crowmarsh Gifford) substantial electricity[45].

Greatmoor Energy from Waste Facility - This is a 30-year joint venture between FCC Environment, a UK waste management and recovery company, and Bucks CC. The plant, just west of Waddesdon off the A41, is designed to treat up to 30,000 tonnes pa of general rubbish (i.e. non-food and non-officially recyclable waste) by diverting this from landfill and using it to generate power[46]. The plant is still at an early and somewhat experimental stage and is linked with a waste transfer station at High Wycombe, poetically called High Heavens[47].

RECOUP (Recycling of Used Plastics Limited) is a leading authority on plastics recycling, providing expertise and guidance on a wide range of recycling to organisations and members across the plastics supply, use and recycling chain, encouraging the better design and packaging of products to minimise waste.

WRAP (The Waste & Resources Action Programme[48]) is a registered charity specialising in reducing waste in three primary areas - food/drink, clothing /textiles and electricals/ electronics.

Residual Waste Treatment Plants - which provide an alternative to landfill. Non-recycled materials are oven-cooked to produce gas that generates electricity. Unlike normal incinerators these facilities produce few toxins.

Composting facilities - e.g. Envar in Cambridgeshire[49].

Smile Plastics - Commercial producers of recycled plastics, such as worktops.

Milton Keynes - The website for MK recycling facility (MRF) has a useful summary of how it deals with materials[50].

5.7 Some Practical Ideas For Action

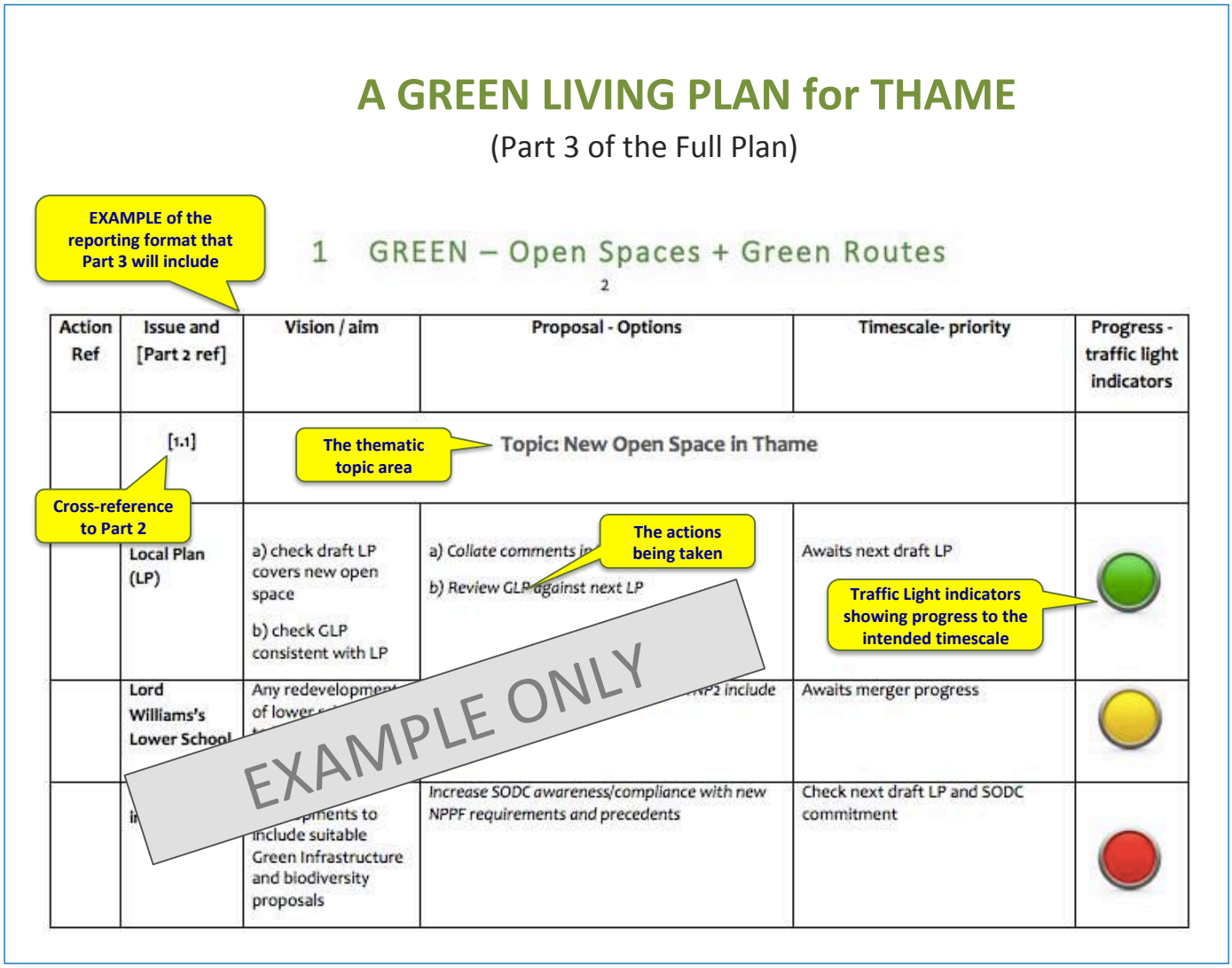
- Packaging
  - Encourage - consumer resistance to buying over-packaged goods
  - Discuss - with local supermarkets about reducing the use of packaging/plastic locally/nationally on own brand and supplier products
  - Reduce - use of plastic and non-recyclable containers - seek alternatives

- Recycling and re-use
  - Explore - how stronger recycling policies can be adopted by local shops and businesses for discarded packaging/plastic, including by staff training
  - Encourage - greater provision of clearly placed receptacles for customers to discard recyclables (+ efficient collections.
  - Consult - with CAG and others to encourage the repair, re-use, and wise disposal of unwanted white and other more bulky goods
- Waste disposal
  - Promote - clearer information about what goes in which receptacle, perhaps initially supported by volunteer assistance
  - Revise - how information is made available to the public and how public may be encouraged to collaborate
- Information and support
  - Explore means of sharing the excellent practices that some local shops and businesses already have in hand
  - Support - businesses showing a lead in reducing or better managing waste

Part 3 - Delivery Strategy and Action Summary

This part of the Green Living Plan summarises the key action points arising from Part 2. It notes the main implications arising and various specific proposals for delivering progress. The intention is that this Part 3 is adapted to reflect developments as the plan matures and becomes a full scale and detailed Delivery Strategy for the Thame Green Living Plan. It includes a simple traffic light indicator to show progress on each item.

Numbered references are to issues in Part 2; RSATG broad recommendations are in italics.



Action Ref	Issue and [Part 2 ref]	Vision / aim	Proposal - Options	Timescale- priority	Progress - traffic light indicators
	[1.1]	Topic: New Open Space in Thame			
	Local Plan (LP)	a) check draft LP covers new open space b) check GLP consistent with LP	a) *Collate comments in* b) *Review GLP against next LP*	Awaits next draft LP	
	Lord Williams's Lower School	Any redevelopment of lower [illegible]	[illegible] NP2 include	Awaits merger progress	
	[illegible]	[illegible]pments to include suitable Green Infrastructure and biodiversity proposals	*Increase SODC awareness/compliance with new NPPF requirements and precedents*	Check next draft LP and SODC commitment	

Appendix 1 - RSA and RSA Thame Group

The RSA (Royal Society for the encouragement of Arts, Manufactures and Commerce) was founded in 1754. It is a registered charity committed to finding innovative, creative and practical solutions to today's social challenges with some 29,000 Fellows (members) worldwide (www.thersa.org).

RSA Thame Group was established and is run by locally-based RSA Fellows to contribute to local issues of environment and sustainability, offering support to Thame Town Council in creating and supporting a Green Living Plan for Thame. The current members of the group are:

Colin Bloxham

Charles Boundy (Chairman)

Anna Comino-James

John Scott

George Westropp

For further information about the group members see https://www.thersa.org/action-and-research/fellowship-projects/fellowship/rsa-thame-group

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Contributors include:

Community Action Group (CAG) (Alice Hemming)

Councillors and Officers of Thame Town Council

Cuttle Brook Conservation Volunteers (Mike Furness)

Aptino Consulting (Robert Friel)

Ghazi, Shelley

Ghazi, Tom

Greening Chinnor (Maureen Dyroff)

Haddenham Safe Walking and Cycling Group (Cynthia Floud and others)

Lea Park Residents' Association

Liftshare (Ali Clayburn)

Lord Williams's School (Mandy Sturdy)

Lucy Electric Limited (Phil Evans)

Oxfordshire Cycling Network (Robin Tucker)

Parmar, Jay

Ramblers Association (Tony Clark, Ruth Cornish)

River Thame Conservation Trust (Nick Marriner)

RSPB (Colin Wilkinson, Brian Fisher)

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SOS water experts (Richard Harding and John Rodda)

Thame to Haddenham Commuter Cycling Group (Stuart Horsman and others)

TTC Continuity Committee and GLP Working Group (Bob Austin, Helena Fickling).

Wild Oxfordshire (Roselle Chapman)

Windles Limited (Sue Leigh)

Wylie, Lin

Appendix 2 - Summary of Main Green Routes Around Thame

Phoenix Trail

This is the main walking and cycling route, running 7 miles on a (mostly) hard track along the route of the old railway to Princes Risborough. Some sections are heavily used by a mix of cyclists, joggers and walkers, with occasional horse riders. Cyclists and walkers are not segregated, with some problems arising, especially when cyclists do not use a bell or other indication of their imminent arrival. The hard surface is being eroded by vegetation and will need upkeep. Some sections (by the old railway bridge) can be underwater after heavy rain. The Phoenix Trail is administered by Sustrans, whose budget is limited.

It would help to understand what (if any) maintenance plans Sustrans have in place, how these can be supported and how the Trail may be further used for leisure purposes.

It is also noted that the land supporting the Phoenix Trail is much wider than the hard trail surface in most areas, and could potentially support fuller or better use whilst retaining the trail's main walking and cycling character.

Cuttle Brook

The Cuttle Brook runs to the south of Thame near the boundary with Thame Park, along the back of the new developments at sites C and D (the Taylor Wimpey/ Bellway and Persimmon developments off Wenman Road either side of Thame Park Road leading out of town) via Moreton, through the Cuttle Brook Nature Reserve, and under the Oxford Road to join the River Thame just north-west of the Prebendal. Once created, the planned riverside paths over sites C and D will provide a walking extension along the Cuttle Brook. We recommend that TNP should continue to emphasise the importance of such routes as key amenities to the town.

These new riverside walks should link up properly, indicating the need for a suitable crossing of the busy Thame Park Road.

Moreton and around

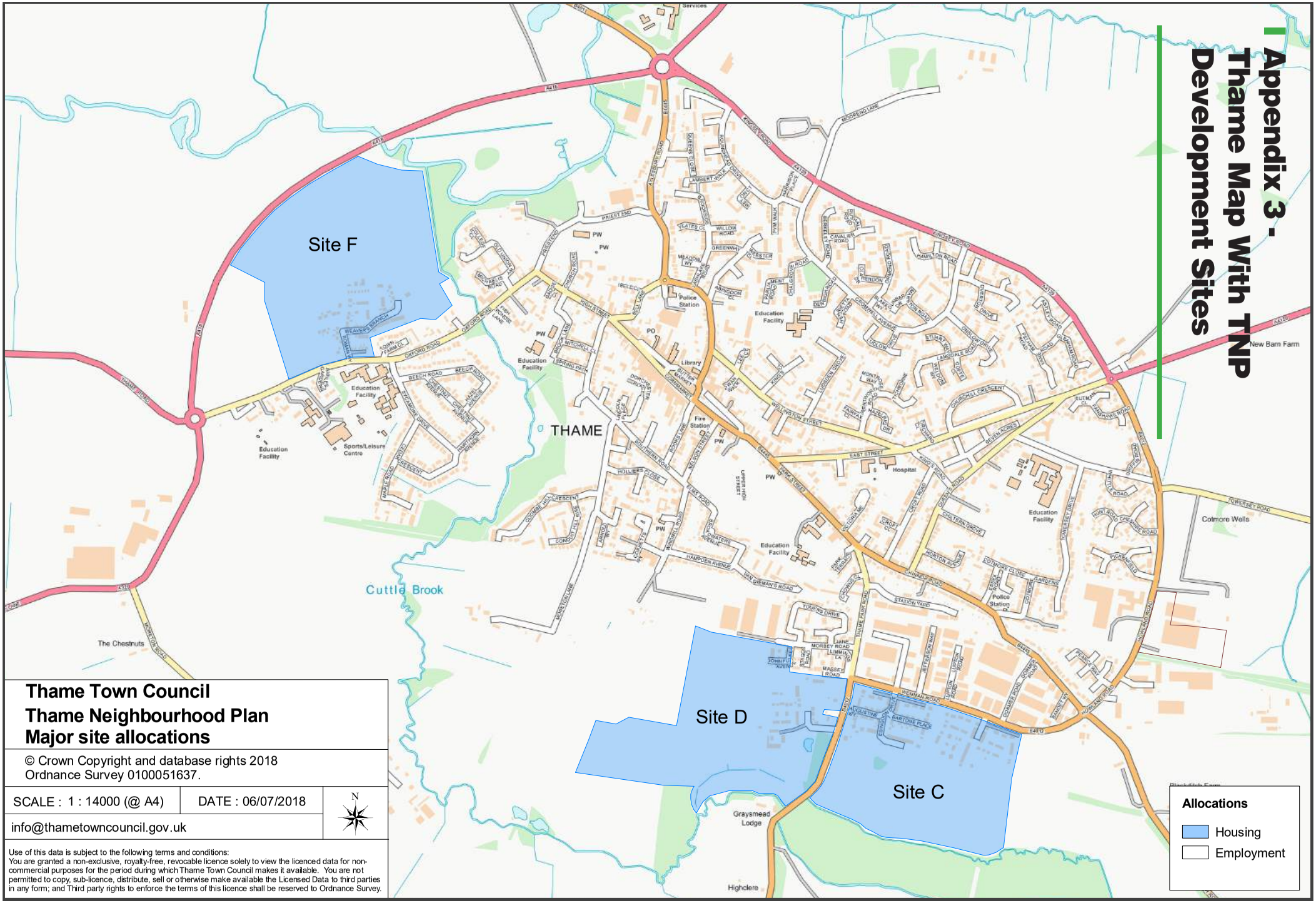
There is an attractive route out of Thame to Moreton, linking with the Phoenix Trail, with a possible circular route through fields and along the Moreton village street. This is regularly used by a cross-section of people both to get to and from Moreton and for general recreational purposes. It is a very valuable route across open green spaces with fine views over fields and towards the Chilterns which should be preserved and protected. However, the optional field sections can be very muddy and often have resident cattle, sheep or horses, which can deter walkers.

The open fields between Thame and Moreton are seen as a valuable part of the soft edge of Thame, enhancing the amenity of these walks. Any opportunity of improving the paths and gate access areas over the fields, in cooperation with the relevant farmers, would enhance these routes further.

Haddenham - There are two main walking routes from Thame to Haddenham, one via Scotsgrove Mill leading towards the station, and one running further east via Tythrop Park Farm and Hook Covert, and emerging by Haddenham Church End. Access is via the footpath alongside the sewerage works and Moorend Lane. This lane currently carries very heavy lorry traffic and the later section of farm track is deeply rutted and can be near impassable after rain. There is also an alternative (or circular) route via the path adjacent to the access to the Rugby Ground.

Long Crendon - The Old Thame Road to Long Crendon runs over the (county boundary) bridge adjacent to the Prebendal to join the current Crendon Road near the golf driving range. This route crosses the very busy by-pass with cars either travelling at high speeds or queuing to reach the Aylesbury Road roundabout. The route is a vital walking and cycling link to Long Crendon but crossing the A418 is dangerous. A good walking (and preferably cycling) route to Long Crendon is also important, as Long Crendon grows and its residents wish to access the facilities of Thame. As the by-pass becomes ever busier and more dangerous to cross, on foot or with a bike, some form of suitable crossing - or at least suitable traffic calming measures - at this point should be regarded as essential. Longer term thought also needs to be given to protecting the old bridge over the River Thame and roadway from further deterioration. This is a much-used route for many coming from the Long Crendon side and those accessing the Prebendal meadow. It is also the only easy point of access to the river which shares its name with the town. A review and longer-term maintenance plan should be established for this purpose (and relative responsibilities considered.)

Appendix 3 - Thame Map With TNP Development Sites



Thame Town Council
Thame Neighbourhood Plan
Major site allocations

SCALE : 1 : 14000 (@ A4) | DATE : 06/07/2018

info@thametowncouncil.gov.uk

End Notes and References

[1] See Appendix 1 for further information on The RSA and the RSA Thame Group. In accordance with RSA principles, the GLP is intended to be non-political and its preparation does not owe allegiance to any political or similar party or group.

[2] The RSA Thame Group and its members act on an honorary basis and cannot accept any responsibility or liability for the Plan or any of its contents.

[3] Based on the Chambers dictionary (12th edition) primary definition.

[4] Such as South Oxfordshire generally.

[5] See 'Constraints and Opportunities' and the plan on pp 10,11 of the TNP.

[6] As an example, the Woodland Trust commissioned Ham Wood off Moorend Lane, with a good mix of trees and grassland, as publicly accessible woodland, albeit outside the main town boundary.

[7] It is believed Thame has many good examples to follow and it is to be hoped that the community orchard planned for site D will be followed elsewhere. See also, for example, the Green Gym projects, including schemes already developed in Bicester, Abingdon, Wallingford and Chipping Norton:

http://www2.tcv.org.uk/cgi-bin/greengym/green_gyms?region=se

[8] A further report will no doubt be issued after the consultation process.

[9] E.g. Haddenham has the Wychert Way – a 12.5 mile route around the town linked with local villages - thanks to connections made by local enthusiasts and the cooperation of local landowners in providing permissive footpaths supported by agricultural grants.

[10] The improved gate at Tythrop shows effective cooperation between landowner and voluntary bodies.

[11] The Phoenix Trail is a highly popular cycle route - covered earlier under walking (see 1.3.)

[12] The Lawton Report of 2010, Making Space for Nature, was followed by the Natural Environment White Paper in 2011 and the 2011 UK National Ecosystem Assessment produced by the Living with Environmental Change Partnership (LWEC). There is also the DEFRA (Department for the Environment, Food and Rural Affairs) Biodiversity 2020: A strategy for England's wildlife and ecosystem services which encourages a strategic approach to planning for nature within and across local areas...to guide development to the best locations, encourage greener design and enable development to enhance natural networks.' This is expected to lead to reforms of the planning system.

[13] This has a high-level board chaired by the Lord Lieutenant of the County that includes leaders from the district councils, the county council and the city of Milton Keynes. It is reasonably well resourced and can call upon a pool of expertise for a joined-up approach to planning and green infrastructure. On the same basis, an alliance of key local players could be brought together – perhaps under the umbrella of a government-approved Local Nature Partnership, in the wake of the Oxfordshire State of Nature report. Its remit might include the monitoring of Local Plans as well as of specific developments to assess improvements in green infrastructure, bio-diversity etc. and the advocating of strategic developments for nature. Amongst these might be Nature Improvement Areas, in addition to the Thame Park Conservation Area.

[14] http://www.kingsbrook-aylesbury.co.uk/

[15] Source: Cuttle Brook Volunteers: http://cuttlebrook.org.uk

[16] Such as the SOS water experts report referred to elsewhere.

[17] www.thameswater.co.uk/yourfuturewater

[18] Recent indications are that TW does not intend to proceed with the proposed Chinnor reservoir and will continue to review population and usage figures. If these require additional water, the Abingdon reservoir scheme could start around 2035 with a view to completion by c 2050. (Source: Richard Harding.)

[19] It is understood that SODC have since (in early 2017) produced its own updated water plan, without consulting either author of the SOS report. The implications of this report are awaited.

[20] For example, ports such as Southampton are badly affected.

[21] https://www.nice.org.uk/guidance/indevelopment/gid-phg92/documents

[22] In January 2017, London experienced exceptionally high levels of pollution, some of which will have drifted westwards www.londonair.org.uk/LondonAir/Default.aspx.

[23] https://www.nice.org.uk/guidance/ng70/chapter/Recommendations#planning

[24] Note for TTC: This may need to be updated.

[25] See, for example, https://www.saferoutespartnership.org/

[26] FoE figures are not confirmed.

[27] See NICE guidance on "Physical activity: walking and cycling (PH41)" https://www.nice.org.uk/guidance/ph41

[28] See for example the detailed notes at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/3873/ltn-1-11.pdf

[29] Bikeability is a national scheme supported by the Department for Transport.

[30] https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution

[31] The Noise Abatement Society has useful guidelines and services: http://noiseabatementsociety.com/

[32] Photo reproduced with kind permission from the Low Carbon Hub, Oxford.

[33] Acknowledgement Financial Times

[34] DECC Community Energy Strategy 2014 and 2015 BEIS update.

[35] http://www.thisismoney.co.uk/money/cars/article-4607870/A-1-000-conversion-turn-lampposts-EVchargers.html

[36] FoE report on a visit to the Milton Keynes Materials Recycling Facility (MK-MRF) in early 2018.

[37] The Co-op's Environment Manager has said: 'We need to stop thinking about [plastic as] waste and start to use it as a resource.'

[38] The position appears to be improved since SODC introduced its policy requiring recycling to be in clear bags or put loose into wheelie bins, a good example of a small change having great benefits.

[39] The Guardian 22 Nov 2016 reported that only 1/3rd of packaging in consumer products is recycled each year. SODC reported in early 2018 that 21% of the items in grey bins should be recycled.

[40] http://www.recoup.org/p/229/2015-uk-household-plastics-collection-survey

[41] info from Surfers Against Sewage, 22 Feb 17

[42] E.g. by machines exchanging transport credits for used plastic bottles (as in Beijing - Channel 4 documentary, 28 Nov 17)

[43] For more about WEEE see http://www.hse.gov.uk/waste/waste-electrical.htm and an update on targets at: https://www.letsrecycle.com/news/latest-news/defra-weee-target-rates/

[44] For example via a new GLP website.

[45] Source – SODC 'Outlook' Spring 2017

[46] See www.fccenvironment.co.uk/greatmoor.html

[47] See http://www.fccenvironment.co.uk/high-heavens.html

[48] www.wrap.org.uk

[49] http://www.envar.co.uk/

[50] file:///C:/Users/charl/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/Y78SY99Z/FoE462%20(MK%20Find%20out%20what%20happens%20to%20your%20recycling).pdf

Note: A list of detailed reference sources has not been included but is available on request.

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