Herefordshire Council

Sustainability Appraisal of the Publication Draft Herefordshire Minerals and Waste Local Plan

Regulation 19 Consultation

Draft report
Prepared by LUC
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Herefordshire Council

Sustainability Appraisal of the Publication Draft Herefordshire Minerals and Waste Local Plan
Regulation 19 Consultation

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Chapter 1
Introduction

Introduction

1.1 This Sustainability Appraisal Report has been prepared by LUC on behalf of Herefordshire Council as part of the integrated Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) of the emerging Herefordshire Minerals and Waste Local Plan (MWLP).

1.2 This SA Report relates to the Publication Draft Herefordshire Minerals and Waste Local Plan (2019) and it should be read in conjunction with that document.

Geographical Context for the Herefordshire Minerals and Waste Local Plan

1.3 Herefordshire is a large, predominantly rural, landlocked county situated in the south western corner of the West Midlands region, on the border with Wales. Herefordshire shares boundaries with five English local authorities (Worcestershire, Shropshire and Gloucestershire County Councils, and Malvern Hills and Forest of Dean District Councils) and three Welsh local authorities (Monmouthshire County Council, Powys County Council, and the Brecon Beacons National Park Authority).

1.4 The county area covers 217,973 hectares. High hill ranges, including the Malvern Hills and Black Mountains, encircle much of the county at its perimeter. Away from these areas, the landscape is one of gentle rolling hills, dissected by wide river valleys with lower-lying plains in the centre. River crossing points have provided a natural focus for the development of many settlements, with others dispersed across Herefordshire's rich and diverse landscape.

1.5 The meandering river valley landscape which is the county's principal geographical feature is that of the River Wye; which enters Herefordshire near the Welsh town of Hay-on-Wye, flowing east to Hereford before leaving the county at the Wye Gorge, downstream of Ross-on-Wye. Herefordshire contains parts of two protected landscapes of national importance: the Wye Valley and Malvern Hills Areas of Outstanding Natural Beauty (AONB).

1.6 Hereford City, near the centre of the county is the main centre for civil and ecclesiastical administration, health, education and leisure facilities, shopping and employment. The five market towns of Bromyard, Kington, Ledbury, Leominster and Ross-on-Wye surround the city. Outside these

urban areas, villages and smaller settlements, farms and other isolated properties characterise much of Herefordshire.

1.7 Further baseline information is provided in **Appendix C**.

Herefordshire Mineral and Waste Local Plan

1.8 Herefordshire Council is currently preparing a new Minerals and Waste Local Plan (Regulation 19 stage). Once adopted, the MWLP will replace the saved minerals and waste policies contained in the Herefordshire Unitary Development Plan. The MWLP covers the period up to 31 December 2041 and applies across the administrative area of Herefordshire.

1.9 The MWLP has been produced taking into account the National Planning Policy for Waste, Planning Practice Guidance on Minerals and Waste, up-to-date evidence base studies (the minerals and waste need assessments were updated in 2019 and a Strategic Flood Risk Assessment [SFRA] was prepared in January 2020) and ensuring close co-operation with neighbouring local authorities on cross-boundary issues.

1.10 It provides a clear vision, objectives and spatial strategy for minerals and waste up to 2041, consistent with that set out in the Herefordshire Local Plan Core Strategy 2011-2031 (adopted October 2015) ensuring that it provides sufficient opportunities to meet the identified needs of the area for waste management and a steady and adequate supply of all economically significant minerals in the Plan area. The MWLP also presents the core principles for minerals and waste development, location-specific policies in relation to where minerals and waste development should be developed, and development management style policies addressing specific issues that each development proposal should address.

Sustainability Appraisal and Strategic Environmental Assessment

1.11 Sustainability Appraisal is a statutory requirement of the Planning and Compulsory Purchase Act 2004. It is designed to ensure that the plan preparation process maximises the contribution that a plan makes to sustainable development and minimises any potential adverse impacts. The SA process involves appraising the likely social, environmental and economic effects of the policies and proposals within a plan from the outset of its development.

1.12 Strategic Environmental Assessment (SEA) is also a statutory assessment process, required under the SEA Directive[1], transposed in the UK by the SEA Regulations (Statutory Instrument 2004, No 1633). The SEA Regulations require the formal assessment of plans and programmes which are likely to have significant effects on the environment and which set the framework for future consent of projects requiring Environmental Impact Assessment (EIA)[2]. The purpose of SEA, as defined in Article 1 of the SEA Directive is '*to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans…with a view to promoting sustainable development*'.

The Implications of Brexit

1.13 As of the end of January 2020 the UK has left the EU although a transition period is in place until 31st December 2020. During this period EU rules and regulations will continue to apply to the UK.

1.14 As set out in the Explanatory Memorandum accompanying the Brexit amendments[3], the purpose of the Brexit amendments to the SEA Regulations is to ensure that the law functions correctly after the UK has left the EU. No substantive changes are being made by this instrument to the way the SEA regime operates.

The SA Process

1.15 SEA and SA are separate processes but have similar aims and objectives. Simply put, SEA focuses on the likely environmental effects of a plan whilst SA includes a wider range of considerations, extending to social and economic impacts. The requirements to carry out SA and SEA are distinct, although it is possible to satisfy both using a single appraisal process (as advocated in the National Planning Practice Guidance), whereby users can comply with the requirements of the SEA Directive through a single integrated SA process – this is the process that is being undertaken in Herefordshire. From here on, the term 'SA' should therefore be taken to mean 'SA incorporating the requirements of SEA'.

1.16 The SA process comprises a number of stages as identified in **Table 1.1**.

Table 1.1: Main stages in Sustainability Appraisal

Stages in Sustainability Appraisal
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope.

[1] SEA Directive 2001/42/EC
[2] Under EU Directives 85/337/EEC and 97/11/EC concerning EIA.
[3] Explanatory Memorandum to the Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018 No. 1232.

Stages in Sustainability Appraisal
Stage B: Developing and refining options and assessing effects.
Stage C: Preparing the Sustainability Appraisal Report.
Stage D: Consulting on the Herefordshire Minerals and Waste Local Plan and the Sustainability Appraisal Report
Stage E: Monitoring the significant effects of implementing the Herefordshire Minerals and Waste Local Plan.

Habitats Regulations Assessment

1.17 Under Article 6 (3) and (4) of the European Union Council Directive 92/43/EEC4 on the conservation of natural habitats and of wild fauna and flora (more commonly known as the Habitats Directive) land-use plans, including Local Plans, are subject to Habitats Regulations Assessment (HRA). The Conservation of Habitats and Species Regulations 20175 transposes the Habitats Directive into national law. The purpose of HRA is to assess the impacts of a land-use plan against the conservation objectives of a 'European site'[6] and to ascertain whether it would adversely affect the integrity of that site.

1.18 The HRA for the MWLP is being undertaken separately to the SA. A HRA Scoping Report was prepared by LUC on behalf of Herefordshire Council in August 2017 and related to the MWLP Issues and Options Report (April 2017). A HRA Screening Report was prepared in parallel with the SA of the Draft MWLP in November 2018 and the findings were taken into account in the SA where relevant (for example to inform judgements about the likely effects of potential development locations proposed in the MWLP on biodiversity).

1.19 The 2020 HRA Report includes a revised Screening Assessment in light of key changes and newly available information (e.g. issue of phosphates in the River Wye SAC) and detailed Appropriate Assessment. A high-level summary of the findings of the HRA Report are summarised below.

1.20 Key changes since the SA of the Draft MWLP include the removal of policy *M7: Unconventional Hydrocarbons*, due to the Government's moratorium on fracking (announced November 2019). Therefore, the effects identified in the 2018 HRA Screening Report in relation to this policy are no longer relevant and therefore reference to these have been removed within the 2020 HRA. Other minor changes include minor revision of site allocation boundaries.

HRA Screening of the Publication Draft MWLP

1.21 The following European sites were included as part of the HRA Screening Stage, to determine whether the Publication Draft MWLP will result in 'Likely Significant Effects' (LSEs) either alone, or in-combination with other plans and projects:

- River Wye SAC (physical damage/ loss of habitat; non-physical disturbance; air pollution; water quantity and quality; non-toxic contamination).
- River Clun SAC (air pollution; water quantity and quality).
- Wye Valley Woodlands SAC (air pollution).
- Wye Valley and Forest of Dean Bat Sites SAC (physical damage/loss of offsite habitat).

1.22 Of the 17 policies in the Publication Draft MWLP, 11 policies were identified as unlikely to have significant effects on any of the European sites. Similarly, 29 out of the 35 sites (11 mineral site allocations; four Areas of Search; seven waste site allocations; and, seven Strategic Employment Areas) proposed for allocation in the Publication Draft MWLP were identified as unlikely to have significant effects on any of the European sites. Whilst no policies or proposed site allocations in the Publication Draft MWLP were certain to result in a LSE, for some there is uncertainty and therefore, in line with the precautionary approach being applied in the HRA, until significant effects can be ruled out, for example following detailed consideration of each potential impact type, as detailed below, they are treated as giving rise to LSEs.

1.23 The screening assessment identified a lack of certainty as to whether the following policies and proposed site allocations in the Publication Draft MWLP would result in LSEs on European sites:

- M3: The winning and working of sand and gravel;
- M5: The winning and working of building stone (sandstone);
- W3: Agricultural waste management;
- W4: Wastewater management;
- W5: Preferred locations for solid waste treatment facilities;
- W6: Preferred locations for construction, demolition and excavation waste facilities;
- M05 Wellington Quarry;

[4] European Union Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

[5] The Conservation of Habitats and Species Regulations 2017

[6] Special Areas of Conservation and Special Protection Areas

- W45 Wellington Quarry (M05);
- M12 Callow Delve;
- W13 Former Lugg Bridge Quarry;
- M20 Westonhill Wood Delve;
- W63 Southern Avenue, Leominster;
- W66 Moreton Business Park, Moreton-on- Lugg; and,
- Area of Search C.

1.24 The HRA Screening concluded that the Publication Draft MWLP could result in the following LSEs:

- River Wye SAC (physical damage/loss of habitat; non-physical disturbance; air pollution; water quality; and non-toxic contamination).
- Wye Valley and Forest of Dean Bat Sites SAC (physical damage and loss of offsite functionally linked habitat).

1.25 **Table 1.2** outlines the Publication Draft policies and sites likely to have significant effects on the River Wye SAC and Wye Valley and Forest of Dean Bat Sites SAC.

Table 1.2: Publication Draft Policies and Sites Likely to have Significant Effects on European Sites

Publication Draft Policies and Site Allocations	River Wye SAC				Wye Valley and Forest of Dean Bat Sites SAC
	Physical loss of or damage to habitat	Non physical disturbance	Water quality	Non toxic contamination	Physical damage/loss of offsite habitat
M3: The winning and working of sand and gravel	X	X	X	X	
M5: The winning and working of building stone (sandstone)			X		
W3: Agricultural waste management			X		
W4: Wastewater management			X		
W6: Preferred locations for construction, demolition and excavation waste facilities	X	X	X	X	
Site M05/W45 Wellington Quarry	X	X	X	X	
Site M12 Callow Delve			X		X
Site M20 Westonhill Wood Delve			X		
Area of Search C	X	X		X	

1.26 Therefore Appropriate Assessment has been undertaken for the River Wye SAC and Wye Valley and Forest of Dean Bat Sites SAC to determine whether the Publication Draft MWLP will result in Adverse Effects on Integrity (AEoI) alone or in-combination with other plans or projects.

Appropriate Assessment of the Publication Draft MWLP

River Wye SAC

Habitat loss/damage and non-physical disturbance

1.27 Wellington Quarry site allocations (M05 and W45) and Area of Search C, located immediately adjacent to the River Lugg component of the River Wye SAC, were identified as potentially supporting suitable habitat for otter associated with the River Wye SAC, and therefore site operations had the

potential to impact otters through habitat loss and damage, or through non-physical disturbance.

1.28 Mitigation measures are recommended for inclusion within the Publication Draft MWLP including, site specific HRA, and a requirement for preparation of site-specific Ecological Mitigation Plans to protect the SAC.

1.29 The HRA concluded that providing the additional recommendations are included and implemented, the Publication Draft MWLP will not give rise to adverse effects on the integrity of the River Wye SAC, either alone or in-combination with other plans or projects as a result of habitat loss and damage or through non-physical disturbance.

Changes in water quality

1.30 The HRA identified the potential for the Publication Draft MWLP to result in impacts to the River Wye SAC through changes in water quality as a result of discharge and run-off of contaminated water, and leaching of chemicals, pollutants and nutrients that may be associated with minerals and waste site. The primary risk to the River Wye SAC was identified as being increasing Phosphate levels within the catchment.

1.31 The requirement for developments to achieve nutrient neutrality or betterment in relation to the River Wye SAC, and in line with Natural England guidance, has been added to the Publication Draft MWLP and supporting text within Chapter 5 of the MWLP explains how Core Strategy policies should be applied to minerals and waste development proposals. Crucially, agricultural waste management policies W3 and W4 and the Key Development Criteria for relevant minerals and waste site allocations include specific reference to achieving nutrient neutrality or betterment, achieving reductions in phosphate releases and to encourage phosphate recovery for beneficial uses.

1.32 The HRA concluded that, in light of the existing safeguards provided, the Publication Draft MWLP will not give rise to adverse effects on the integrity of the River Wye SAC, either alone or in-combination with other plans or projects as a result of changes in water quality.

Air pollution

1.33 The HRA Screening identified the potential for 'anaerobic digestion' or 'energy from waste' facilities to affect the River Wye SAC through air pollution if proposals come forward within 10km of the SAC. However, any such proposal will need to obtain an Environmental Permit (EP), as regulated by the Environment Agency. This ensures that there is a requirement to demonstrate that they will avoid harm to the River Wye SAC (and other European sites).

1.34 The HRA concluded that, in light of the existing safeguards provided, the Publication Draft MWLP will not give rise to adverse effects on the integrity of the River Wye SAC, either alone or in-combination with other plans or projects as a result of air pollution associated with anaerobic digestion or energy from waste facilities.

Non-toxic contamination

1.35 The potential for non-toxic contamination, for example through smothering from dust, was limited to the Wellington Quarry waste and minerals sites and Area of Search C because of their proximity to the River Wye SAC, and policies M3 and W6 which specifically focus minerals and waste operations to the Wellington Quarry sites.

1.36 Avoidance and mitigation measures already included in the Core Strategy were considered likely to considerably reduce the potential for adverse effects on integrity but additional recommendations were made to provide more certainty. This included recommendations to strengthen section 5.7 of the MWLP relating to Core Strategy policy SD1 including a commitment to assessing and mitigation effects on ecological receptors from dust.

1.37 Appendix A of the Publication Draft MWLP (Allocated Sites and the Key Development Criteria) also provide robust mitigation and avoidance safeguards including a requirement for site specific project level assessment.

1.38 The HRA concluded that providing the additional recommendations are included and implemented, the Publication Draft MWLP will not give rise to adverse effects on the integrity of the River Wye SAC, either alone or in-combination with other plans or projects as a result of non-toxic contamination.

Wye Valley and Forest of Dean Bat Sites SAC

Loss of functionally linked habitat

1.39 Proposed minerals allocation M12 Callow Delve in the Publication Draft MWLP was identified as having the potential to provide offsite but functionally linked habitat for the horseshoe bats associated with the Wye Valley and Forest of Dean Bat Sites SAC.

1.40 Appendix A of the Publication Draft MWLP (Allocated Sites and the Key Development Criteria) includes specific avoidance and mitigation safeguards, including the requirement for project level HRA which demonstrates how adverse effects on horseshoe bats will be avoided.

1.41 Therefore, the safeguards already included in the Publication Draft MWLP will ensure that adverse effects on the integrity of the Wye Valley and Forest of Dean Bat Sites SAC, as a result of damage and loss of off-site habitat, will be avoided, either alone or in-combination.

HRA Recommendations and Conclusion

1.42 **Table 1.3** outlines the recommendations are made in the HRA to provide certainty that adverse effects on European Sites will be avoided. In summary, providing the existing mitigation measures provided by the Local Plan-Core Strategy policies and MWLP supporting text and Key Development Criteria are successfully implemented, along with the inclusion and implementation of the additional recommendations listed above, the Publication Draft MWLP will not give rise to adverse effects on the integrity of European sites, either alone or in-combination with other plans or projects.

Table 1.3: Summary of HRA Recommendations

MWLP Reference Location	Recommendation
MWLP Appendix A: Key Development Criteria	Commitment to site specific HRA for the Wellington Quarry minerals and waste site allocations including requirement for detailed protected species surveys for otter to determine any site-specific mitigation and protection measures such as timing of works and disturbance buffers.
MWLP - Policy M3	Requirement for project-level/site specific HRA and targeted ecological survey for otter.
MWLP - paragraph 5.4.10	Recommend inclusion of the following wording: "*A management strategy associated with a minerals or waste development should, where appropriate, include an Ecological Mitigation Plan which specifies working methods, timings and buffers within the development site required to protect vulnerable ecological features, including European Sites. The mitigation plan will include appropriate disturbance buffers, with the size and shape of the buffer defined on a site-by-site basis and dependent on the attributes of the feature. Such Ecological Mitigation Plans will also be required for new sites coming forward in Area of Search A where there is potential for operations to effect the River Wye SAC*."
MWLP – Section 5.7.6	It is recommended that the wording of this section of the Publication Draft MWLP is strengthened, in line with the suggested replacement wording for paragraph 5.7.6: "5.7.6: If *not properly controlled at source, dust can cause nuisance to people and businesses, and harm through deposition on property and farmland.* ***Dust can also cause adverse ecological impacts to sensitive sites***."
MWLP – Section 5.7.7	It is recommended that the wording of this section of the Publication Draft MWLP is strengthened, in line with the suggested replacement wording for paragraph 5.7.7: "5.7.7: *A dust assessment will be required where fugitive dust emissions are likely to cause a nuisance* ***or adverse ecological impact****; atmospheric dispersion modelling may be required to determine whether there is a risk of health effects due to dust emissions. A separate dust assessment is not required where dust is addressed within an air quality assessment and/or health impact assessment as appropriate*."

Meeting the Requirements of the SEA Regulations

1.43 **Table 1.4** signposts how the requirements of the SEA Regulations have been met within this SA Report.

Table 1.4: Meeting the requirements of the SEA Regulations

SEA Regulations Requirements	Covered in this SA Report
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated (Reg. 12). The information to be given is (from Schedule 2):	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Chapters 1 and 3 and Appendix A
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Chapter 3 and Appendix C

SEA Regulations Requirements	Covered in this SA Report
c) The environmental characteristics of areas likely to be significantly affected;	Chapter 3 and Appendix C
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.;	Chapter 3 and Appendix C
e) The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation;	Chapter 3 and Appendices A and C
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);	Chapters 4-6 and Appendices G, H and I
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Chapter 7
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Chapter 2 and Appendices D and E
i) a description of measures envisaged concerning monitoring in accordance with Reg. 17;	Chapter 8
j) a non-technical summary of the information provided under the above headings	A non-technical summary document has been prepared to accompany this SA Report.
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Reg. 12(3))	Addressed throughout this SA Report.
Consultation: • authorities with environmental responsibility, when deciding on the scope and level of detail of the information which must be included in the environmental report (Reg. 12(5))	Consultation on the SA Scoping Report was undertaken between February and March 2017.
• authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Reg. 13)	Consultation on the SA of the MWLP Issues and Options Report was undertaken for 8 weeks between August 2017 and October 2017. Consultation on the SA of the Draft MWLP was undertaken in early 2019 for a six-week period. Consultation is being undertaken in relation to the Publication Draft Herefordshire Minerals and Waste Local Plan in January 2021, for a 6-week period. The current consultation document is accompanied by this SA Report.
• other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Reg. 14).	N/A

SEA Regulations Requirements	Covered in this SA Report
Provision of information on the decision: When the plan or programme is adopted, the public and any countries consulted under Reg. 14 must be informed and the following made available to those so informed: • the plan or programme as adopted • a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report, the opinions expressed and the results of consultations entered into have been taken into account, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and • the measures decided concerning monitoring	To be addressed after the MWLP is adopted.
Monitoring of the significant environmental effects of the plan's or programme's implementation (Reg. 17)	To be addressed after the MWLP is adopted.

Structure of the SA Report

1.44 This chapter has described the background to the production of the MWLP, and the requirement to undertake SA and other assessment processes. The remainder of this report is structured into the following sections:

- **Chapter 2: Methodology –** describes the approach that is being taken to the SA of the Publication Draft MWLP.
- **Chapter 3: Sustainability Context for Minerals and Waste Development in Herefordshire -** describes the relationship between the MWLP and other relevant plans, programmes and environmental protection objectives; summarises the social, economic and environmental characteristics of the county and identifies the key sustainability issues.
- **Chapter 4: Sustainability Appraisal Findings of the Mineral and Waste Site Allocations and Options –** describes the SA findings of the mineral and waste site allocations, including the four mineral site options, that have been considered for allocation in the Publication Draft MWLP.
- **Chapter 5: Sustainability Appraisal Findings of the Publication Draft Herefordshire Minerals and Waste Local Plan Policies –** describes the SA findings of the Vision, strategic objectives and policies proposed in the Publication Draft MWLP.
- **Chapter 6: Sustainability Appraisal Findings of the Publication Draft Herefordshire Minerals and Waste Local Plan** – describes the total effects of the MWLP's Vision; 12 strategic objectives; four strategic policies/general principles; six mineral-related policies; seven waste-related policies; 22 mineral and waste site allocations; four Areas of Search; and, nine Strategic Employment Areas. This chapter also describes the duration of effects and secondary, cumulative and synergistic effects of the Plan.
- **Chapter 7: Mitigation and Recommendations** – describes mitigation measures that prevent, reduce and offset significant adverse effects from implementing the plan. Recommendations for improving the plan are also identified in this chapter.
- **Chapter 8: Monitoring** – describes the approach that should be taken to monitoring the likely significant effects of the MWLP and proposes monitoring indicators.
- **Chapter 9: Conclusion** summarises the key findings from the SA of the Publication Draft MWLP and describes the next steps to be undertaken in the plan-making process.

1.45 The main body of the report is supported by a number of appendices as follows:

- **Appendix A** presents the review of **relevant plans, programmes and environmental protection objectives** of relevance to the Plan.
- **Appendix B** presents the **maps** depicting the baseline information.
- **Appendix C** presents the updated **baseline information** for Herefordshire.
- **Appendix D** presents the **audit trail of the site options** that have been considered for the Publication Draft MWLP and gives the Council's reasons for selecting or discounting the different site options.
- **Appendix E** presents an **audit trail of the policies** evolution from Issues and Options to Publication Draft.
- **Appendix F** presents the **assumptions** that were applied during the appraisal of mineral and waste site options.

- **Appendix G** presents the detailed SA matrices for the **mineral site options** that are being considered for inclusion in the Publication Draft MWLP.
- **Appendix H** presents the detailed SA matrices for the **reasonable alternative mineral site options** that were considered but not included in the Publication Draft MWLP.
- **Appendix I** presents the detailed SA matrices for the **waste site options** that are being considered for inclusion in the Publication Draft MWLP.
- **Appendix J** presents the detailed SA matrices for the **policy options** that are being considered for inclusion in the Publication Draft MWLP.
- **Appendix K** presents the **consultation comments** received in relation to the SA Scoping Report and the Draft MWLP SA Report and explains how each one has been addressed during the preparation of this SA Report. No specific comments were received on the SA of the MWLP Issues and Options Report.

Chapter 2
Methodology

Introduction

2.1 This chapter of the Publication Draft SA Report describes the method and approach to undertaking the SA and documents the approach to the main stages of the SA (see **Table 1.1**). In addition to complying with legal requirements, the approach being taken to the SA of the MWLP is based on current best practice and the guidance on SA/SEA set out in the National Planning Practice Guidance, which involves carrying out SA as an integral part of the plan-making process.

Stage A: Scoping

2.2 The SA process began in February 2017 with the production of a Scoping Report for the MWLP.

2.3 The scoping stage of the SA involves understanding the social, economic and environmental baseline for the plan area as well as the sustainability policy context and key sustainability issues. The Scoping Report presented the outputs of the following tasks:

- Plans, programmes and environmental protection objectives of relevance to the MWLP were identified and the relationships between them were considered, enabling any potential synergies to be exploited and any potential inconsistencies and incompatibilities to be identified and addressed.
- Baseline information was collected on environmental, social and economic issues. This baseline information provides the basis for predicting and monitoring the likely effects of the MWLP and helps to identify alternative ways of dealing with any adverse effects identified.
- Key sustainability issues for the county were identified.
- A Sustainability Appraisal Framework was presented, comprising the SA objectives against which options and, subsequently, sites and policies would be appraised. The SA objectives were primarily based on those already developed for the Herefordshire Local Plan – Core Strategy, however, a number of new objectives specific to minerals and waste were introduced and those objectives which are irrelevant to the MWLP were removed. The objectives were also reorganised and amalgamated to reduce duplicity (previously 23 objectives for the Herefordshire Local Plan – Core

Strategy). As in the Core Strategy, the 17 SA objectives are grouped into six themes to enable related sustainability issues to be considered together during the appraisal. The six themes are as follows:

- Education and employment.
- Healthy and prosperous communities.
- Transport and access.
- Built environment.
- Resource consumption and climate change.
- Natural environment.

2.4 Public and stakeholder participation is an important element of the SA and wider plan-making processes. It helps to ensure that the SA Report is robust and has due regard for all appropriate information that will support the plan in making a contribution to sustainable development. The SA Scoping Report for the MWLP was published in February 2017 for a five-week consultation period with the statutory consultees (Natural England, the Environment Agency and English Heritage [now Historic England]). The SA of the MWLP Issues and Options Report was published in August 2017 for eight weeks. No comments were received during the consultation period on the SA Report. Consultation on the SA of the Draft MWLP was undertaken in early 2019 for a six-week period. Comments were received from seven organisations. Therefore, **Appendix I** lists the comments that were received during the scoping consultation and the Draft MWLP consultation and describes how these are addressed in the SA Report.

2.5 The SA Framework for the MWLP is presented in **Table 2.1** and outlines the 17 main SA objectives along with their associated appraisal questions and demonstrates how all of the topics required by the SEA Regulations have been covered by the SA objectives (in the final column).

2.6 The wording of some of the objectives has been revised since the Scoping Report to take into account the suggestions of the statutory consultees. Additional sub-criteria for SA objectives **12: Biodiversity and Geodiversity** and **15: Flooding** have been included based on recommendations made by Natural England and the Environment Agency. Furthermore, as the SA Framework for the MWLP is broadly similar to that used in the SA of the Hereford Area Plan DPD, the recommendations made by Historic England to separate the SA objective relating to the historic and built environment into two distinct SA objectives has been incorporated in this SA Framework (now SA objective 6: Historic Environment and SA objective 7: Built Environment). In addition, reference to historic landscapes has been removed from SA objective 13: Landscape and is now considered in SA objective 6: Historic Environment.

Table 2.1: SA Framework for the Herefordshire Minerals and Waste Local Plan

SA Objective	Appraisal Question	SEA Topic covered by objective
Employment		
1. Support, maintain or enhance the provision of employment opportunities in the minerals and waste sectors.	1.1 Support the development and growth of the minerals and waste economy in Herefordshire and generate employment opportunities for local people.	Material assets[7], population
2. Maintain or enhance conditions that enable a sustainable economy and continued investment.	2.1 Encourage long-term investment in Herefordshire's minerals and waste sectors. 2.2 Ensure a steady and adequate supply of minerals to meet the needs of society in accordance with national policy.	Material assets, population
Healthy and Prosperous Communities		
3. Protect and improve the health of the people of Herefordshire and reduce disparities in	3.1 Avoid or minimise adverse effects on human health and safety to acceptable levels from mineral and waste operations. 3.2 Provide opportunities to improve health and amenity through delivery of green infrastructure, enhanced public rights of way and	Population, human health

[7] 'Material assets' is listed as one of the topics to be considered in the SEA, but there is no clear definition of what this topic should cover in the SEA Directive or Regulations, and it has been variously defined in different SEA reports as relating to natural resources, e.g. minerals, or built infrastructure, e.g. transport infrastructure. For the purposes of this SEA, the material assets topic is assumed to include resources such as water, minerals and waste, as well as built infrastructure, including transport and waste infrastructure, but also economic and employment infrastructure and interests.

SA Objective	Appraisal Question	SEA Topic covered by objective
health geographically and demographically.	improved access to recreation as part of the development and restoration of sites. 3.3 Avoid or minimise adverse effects on the quality and extent of existing recreational assets.	
4. Reduce poverty and social inclusion by closing the gap between the most deprived areas in the county and the rest of the county.	4.1 Provide opportunities for local people to access employment and skills in the minerals and waste sectors.	Population, human health
Transport and Access		
5. Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county.	5.1 Reduce the vehicle kilometres travelled for the transportation of minerals and waste. 5.2 Promote the use of sustainable modes of transport. 5.3 Encourage the use of low emission vehicles for the transportation of waste and minerals.	Material assets
Built & Historic Environment		
6. Value, protect and enhance the county's historic environment and cultural heritage.	6.1 Conserve, protect and enhance designated and undesignated heritage assets in a manner appropriate to their significance, including the Hereford Area of Archaeological Importance, Conservation Areas, Scheduled Monuments, Registered Historic Parks and Gardens Listed Buildings, archaeological remains, and areas of historical heritage and cultural value e.g. locally listed buildings.	Cultural heritage, including architectural and archaeological heritage
7. Value, protect and enhance the character and built quality of settlements and neighbourhoods.	7.1 Prevent development which is inappropriate in scale, form or design to its setting or to its function or local area.	Material assets, soil
Resource Consumption and Climate Change		
8. Move treatment of waste up the waste hierarchy.	8.1 Minimise disposal of waste to landfill from households, businesses etc. including hazardous waste. 8.2 Promote re-use, recovery and recycling of waste. 8.3 Deal with waste locally and/or through the best Practical Environmental Option. 8.4 Promote sustainable waste management principles.	Material assets
9. Promote sustainable use of mineral resources.	9.1 Safeguard mineral resources from loss by permanent sterilisation. 9.2 Promote the most efficient use of mineral resources.	Material assets
10. Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem.	10.1 Reduce the county's contribution to climate change by reducing greenhouse gas emissions from waste and mineral transportation and management activities. 10.2 Promote energy efficiency by encouraging the use of energy efficient buildings and plant, and the use of appropriate renewable or lower carbon energy sources on site.	Climatic factors

SA Objective	Appraisal Question	SEA Topic covered by objective
11. Promote effective restoration and appropriate after use of sites.	11.1 Provide for the restoration of land to an appropriate after-use including the creation of accessible greenspace at former waste and mineral sites.	Water, air, soil
Environmental		
12. Value, maintain, restore and expand county biodiversity and geodiversity.	12.1 Protect and enhance habitats of international, national, regional or local importance. 12.2 Protect international, national, regional or locally important terrestrial or aquatic species. 12.3 Maintain wildlife corridors and minimise fragmentation of ecological areas and green spaces. 12.4 Provide opportunities for enhancing biodiversity and achieve net gains in biodiversity, where possible as part of the development and restoration of a site. 12.5 Maintain and improve geodiversity, avoid irreversible losses, and create, extend or enhance Local Geological Sites.	Biodiversity, fauna, flora
13. Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces.	13.1 Value, enhance and protect natural environmental assets including AONB's, open spaces, parks and gardens and their settings. 13.2 Minimise the landscape and visual intrusion of waste and mineral facilities on sensitive and/or distinct landscapes.	Landscape, fauna, flora
14. Value, protect and enhance the quality of watercourses and maximise the efficient use of water.	14.1 Protect and enhance the quality of watercourses. 14.2 Maximise the efficient use of water and protect the quality and quantity of ground and surface water from over abstraction.	Water
15. Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment.	15.1 Ensure minerals and waste development are not at risk of flooding both presently and taking into account climate change and do not increase the risk of flooding elsewhere. 15.2 Ensure flood risk reduction / improvements to the flood regime.	Water
16. Minimise noise, light, and air pollution.	16.1 Minimise air, noise and light pollution from activities associated with mineral and waste developments and the potential for such pollution. 16.2 Help achieve the objectives of Air Quality Management Plans.	Air
17. Value, protect and enhance soil quality and resources.	17.1 Provide opportunities to improve soil quality and minimise contamination of soils. 17.2 Avoid the loss of the best and most versatile agricultural land by prioritising the location of waste and mineral developments to previously developed sites in preference to greenfield locations.	Soil

Stage B: Developing and refining options and assessing effects

2.7 Regulation 12 (2) of the SEA Regulations require that:

"The (environmental or SA) report must identify, describe and evaluate the likely significant effects on the environment of -
(a) implementing the plan or programmes; and
(b) reasonable alternatives, taking into account the objective and the geographical scope of the plan or programme"

2.8 It should be noted that any alternatives considered to the plan need to be 'reasonable'. This implies that alternatives that are not reasonable do not need to be subject to appraisal. Examples of unreasonable alternatives could include policy options that do not meet the objectives of the plan or national policy (e.g. the NPPF) or site options that are unavailable or undeliverable.

2.9 It also needs to be recognised that the SA findings are not the only factors taken into account when determining which options to take forward in a plan. Indeed, there will often be an equal number of positive or negative effects identified for each option, such that it is not possible to 'rank' them based on sustainability performance in order to select an option. Factors such as public opinion, deliverability and conformity with national policy will also be taken into account by plan-makers when selecting options for their plan.

2.10 The following sections describe how the appraisal of site and policy options has fed into the development of the Publication Draft MWLP. **Appendices D** and **E** present audit trails of how the sites and policies have evolved from the Issues and Option stage to the Publication Draft stage.

Identification and appraisal of the options for the Herefordshire Minerals and Waste Local Plan

MWLP Issues and Options Report (August 2017)

2.11 The MWLP Issues and Options Report included consultation questions relating to a number of minerals and waste issues to be addressed by the MWLP. Not all of the consultation questions identified specific options for each issue (i.e. alternative ways that the MWLP could address the issue). Many of the consultation questions were just opinion-seeking questions and therefore were not subject to SA. The MWLP Issues and Options Report identified options (or reasonable alternatives as they are referred to in the SEA Regulations) for the Vision, strategic objectives and the approach for addressing minerals and waste development in Herefordshire. In total, 34 options (one option for the Vision, one option for the strategic objectives, 18 mineral-related options and 14 waste-related options) were presented in the MWLP Issues and Options Report.

2.12 The options proposed in the MWLP Issues and Options Report were subject to a detailed appraisal in the SA Report (August 2017) against the SA objectives which were developed at the scoping stage of the SA process.

SA findings of the Issues and Options Report

2.13 The SA of the Issues and Options Report assessed 34 options (one option for the Vision, one option for the strategic objectives, 18 mineral-related options and 14 waste-related options).

Vision and Strategic Objectives

2.14 The SA of the Issues and Options Report found that the Vision and Strategic Objective options were likely to have mostly positive effects on the economic objectives (SA objectives **1: Employment; 2: Sustainable Economy**; and, **4: Poverty and Equality**), as they support the development and growth of the minerals and waste economy, and the generation of employment opportunities in Herefordshire. Significant positive effects were identified for SA objectives **7: Waste Hierarchy** and **8: Mineral Resources** as the Vision promotes the sustainable provision of minerals and waste management through the efficient use of mineral resources and by supporting the circular economy.

2.15 Significant positive effects were identified for SA objectives **6: Built & Historic Environment**, **11: Biodiversity**, **12: Landscape**, **13: Water**, **14: Flooding** and **16: Soil** for strategic objective 11 (Environment) as it supports the protection, conservation and enhancement of historic assets and the natural environment. A significant positive effect was identified for strategic objective 4 (Health) in relation to SA objective **3: Health** as it directly supports minerals and waste development that make an appropriate contribution to improving health, well-being and quality of life of residents. Similarly, a significant positive effect was identified for strategic objective 8 (Sustainable transport) for SA objective **5: Sustainable Transport** as it seeks to reduce the need to travel and lessen the harmful impacts from traffic growth, promote the use of alternatives to road transport and ensure that new development is served by sustainable transport networks.

2.16 Significant positive effects were identified for strategic objectives 3 (Waste hierarchy) and 6 (Waste management) in respect to SA objective **7: Waste Hierarchy** as they promote a circular economy and the adequate provision of waste management infrastructure in Herefordshire. Significant positive effects were identified for strategic objectives 1 (Safeguarding), 2 (Efficient use of minerals) and 3 (Waste hierarchy) for SA objective **8: Mineral Resources** as they seek to safeguard mineral resources and

promote resource efficiency which directly support the SA objective. Significant positive effects were also identified for strategic objectives 3 (Waste hierarchy) and 10 (Climate change) for SA objectives **9: Climate Change** and **15: Pollution** as they promote a circular economy and seek to address the causes and impacts of climate change relating to minerals and waste development activity thereby reducing air pollution from greenhouse gas emissions.

2.17 No significant negative effects were identified for the Vision or any of the strategic objectives.

Mineral-related options

2.18 The SA found that the mineral-related options were likely to have mostly positive effects with some significant positive effects identified for SA objectives **1: Employment, 2: Sustainable Economy** and **4: Poverty & Equality** as the options support development which will contribute to the local economy and provide employment opportunities (albeit in a limited number). Mixed effects (uncertain minor positive/uncertain minor negative) were identified for the majority of the 18 mineral-related options, particularly in relation to SA objectives **3: Health**, **6: Built & Historic Environment**, **11: Biodiversity**, **12: Landscape**, **13: Water**, **14: Flooding** and **16: Soil**. The mixed effects generally related to potential continued negative impacts associated with the operation or extension of mineral sites on nearby local communities (e.g. from dust, noise, vibration and traffic levels), heritage assets and their settings, habitats, species, landscapes, water resources, and the soil environment. Most options sought to limit adverse impacts on previously unaffected communities, and heritage and environmental assets. Generally mixed effects (uncertain minor positive/uncertain minor negative) were also identified for SA objectives **5: Sustainable Transport, 9: Climate Change** and **15: Pollution** as the provision of additional mineral reserves reduces the need for importing aggregate minerals and their associated transport emissions, however, it is unknown whether the transport of minerals would utilise either sustainable transport modes (e.g. rail) or the road network. The effects on SA objective **8: Mineral Resources** were generally either negligible or minor negative. Uncertain minor positive effects were identified for SA objective **10: Restoration** for most options as the provision of additional mineral reserves provides opportunities for the restoration of land at mineral sites once extraction has ceased.

Waste-related options

2.19 The SA found that the waste-related options were likely to have significant effects, both positive and negative, with regards to SA objective **7: Waste Hierarchy**. Significant positive effects (as part of mixed effects) were identified as some options support the allocation of waste management facilities that provide facilities for recycling, energy recovery and appropriate waste disposal which supports the movement of waste up the waste hierarchy. Significant negative effects (as part of mixed effects) were identified for some options as they would not identify sites for the management of LACW or C&I waste. A mix of minor positive, minor negative and mixed effects (minor positive/minor negative) were identified for the majority of waste-related options for SA objectives **1: Employment**, **2: Sustainable Economy** and **4: Poverty and Equality**. The positive effects generally related to identifying and allocating suitable waste sites which would support investment and growth of the waste economy in Herefordshire and generate employment opportunities for local people. The negative effects primarily related to options not supporting the identification and allocation of sites for waste management.

2.20 A mix of minor positive, minor negative and mixed effects (minor positive/minor negative) were also identified for the majority of options for SA objectives **3: Health**, **5: Sustainable Transport, 6: Built & Historic Environment, 9: Climate Change, 11: Biodiversity, 12: Landscape, 13: Water, 14: Flooding, 15: Pollution** and **16: Soil.** The positive effects generally related to the options which support the identification and allocation of sites as these are likely to promote development at less sensitive locations in terms of the built, historic and natural environment, as well as reducing the requirement for cross boundary vehicular traffic associated with waste treatment and disposal which will reduce road traffic, congestion and the release of greenhouse gas emissions. The negative effects generally were in relation to options supporting the safeguarding of existing waste sites, the extension of existing waste sites or options that did not support the allocation of new waste management facilities, or the potential continued negative impacts associated with the operation or extension of waste sites on nearby local communities (e.g. from dust, noise, vibration and traffic levels), heritage assets and their settings, habitats, species, landscapes, water resources, and the soil environment. . Negligible effects were identified for all options for SA objectives **8: Mineral Resources** and **10: Restoration**.

Draft MWLP (December 2018)

2.21 The Draft MWLP included a Vision; 12 strategic objectives; seven mineral-related policies; seven waste-related policies; 28 mineral and waste site allocations; four Areas of Search; and, nine Strategic Employment Areas, which constituted the options for the Draft MWLP and were developed from the policy approach options considered in the Issues and Options Report. **Table 2.2** lists the policies included in the Draft MWLP

2.22 The policy and site options proposed in the Draft MWLP were subject to a detailed appraisal in the Sustainability Appraisal Report (December 2018), as summarised below.

Table 2.2: Policies included in the Draft MWLP

Draft MWLP Policies
Strategic policies
MT2: Transport within Sites
SS8: Resource Management
OS4: Access to Open Space and Recreation from Minerals and Waste Development
SD5: Site Reclamation
Mineral related policies
M1: Mineral Strategy
M2: Safeguarding of Mineral Resources from Sterilisation
M3: The Winning and Working of Sand and Gravel
M4: The Winning and Working of Crushed Rock (limestone)
M5: The Winning and Working of Building Stone (sandstone)
M6: Borrow Pits
M7: Unconventional Hydrocarbons
Waste related policies
W1: Waste Strategy
W2: Solid Waste Management Requirements
W3: Agricultural Waste Management
W4: Waste Water Management
W5: Preferred Locations for Solid Waste Treatment Facilities
W6: Preferred Locations for Construction, Demolition and Excavation Waste Facilities
W7: Waste Management Operational Expectations

Draft MWLP site options

2.23 Specific site options were not identified in the Issues and Options Report and its accompanying SA in 2017 but were considered during the preparation of the Draft MWLP and in the SA Report in 2018. The Spatial Context and Sites Report (Hendeca, 2019) explains that mineral and waste sites were first identified through the 2017 Mineral Needs Assessment (MNA) and Waste Needs Assessment (WNA) process and during the Call for Sites in 2016 and 2017.

2.24 In general, the mineral site options that were not considered reasonable alternatives are those that are closed and restored, are currently being restored, or have been put to some other use. For the waste site options, a number of existing waste facilities are located on Strategic Employment Areas or industrial estates. These sites were not appraised separately as reasonable alternatives because, although they are already in waste use, the facility is located on a plot within an industrial estate/Strategic Employment Area that experience a reasonably high level of plot turnover which makes it inappropriate to allocate discrete plots/sites within the estates within the MWLP. However, a number of the strategic employment locations (sites W58-W66) are identified in Herefordshire Core Strategy policy E1, and have been appraised in their entirety as reasonable alternatives (i.e. not just individual plots within the wider strategic employment location) as they have good potential for co-location and could accommodate strategic waste facilities. Finally, some of the waste site options considered in the Spatial Context and Sites Report were not reasonable alternatives for SA as they are not located within the spatial strategy preferred area (waste development will be focused at Hereford, Leominster and the market towns in line with the overarching spatial strategy of the Core Strategy), while others were proposed mineral sites which are either closed or mothballed, or being restored, so not appropriate for waste uses.

Draft MWLP site allocations

2.25 The SA of the Draft MWLP appraised 20 mineral site allocations; four Areas of Search; and two reasonable alternative mineral site allocations.

2.26 Recognising the advantages of working an area efficiently, sites for future sand and gravel and crushed rock extraction were proposed for allocation adjacent or near to existing permitted sites. Sand and gravel reserves at Upper Lyde (M03); Shobdon (M04); and Wellington (M05) were all proposed to be allocated in the Draft MWLP. Crushed rock reserves at Leinthall (M07) and Perton (M10) quarries were both proposed to be allocated in the MWLP. The sand and gravel reserves at sites M03 and M05 and the crushed rock reserves at M07 and M10 were subdivided into individual parcels of land which identify the active part of the site as well as the proposed extensions (M03a-M03d, M05a-M05g, M07a, M07b, M10a and M10b). The SA appraised each parcel of land within these sites separately as not all of the parcels were proposed for allocation in the Draft MWLP, i.e. M03c and M05f, and therefore constitute reasonable alternatives to the preferred sites proposed for allocation in the Draft MWLP.

2.27 In addition, preferred areas of search were identified in the Draft MWLP for working sand and gravel and crushed rock (limestone) reserves in Herefordshire.

2.28 There are six building stone delves currently permitted and active in Herefordshire, all of which would be suitable in principle to gain an extension of time to enable extraction to be completed: Callow Delve (M12); Black Hill Delve (M13); Llandraw Delve (M16); Pennsylvani Delves (M17); Sunnybank Delve (M18); and, Westonhill Wood Delve (M20). Three of these sites would also be suitable, in principle, for a lateral extension or deepening of workings: Black Hill Delve (M13); Llandraw Delve (M16); and Westonhill Wood Delve (M20).

2.29 The Draft MWLP supported the delivery of waste treatment facilities at industrial estates or Strategic Employment Areas. An appraisal of the potential of co-location and the development of strategic facilities at nine Strategic Employment Areas was undertaken as part of the SA. However, the potential development of waste treatment facilities at each industrial area in Herefordshire was not subject to SA as the Draft MWLP stated that it would be inappropriate to allocate discrete sites within these estates as this type of location experiences a reasonably high level of plot turnover.

2.30 The Draft MWLP proposed the allocation of eight waste treatment sites: Leominster Household Waste Site (HWS) and Household Waste Recovery Centre (HWRC) (W05); Ledbury HWRC (W07); Kington HWRC (W10); Former Lugg Bridge Quarry (Physical Treatment) (W13); and, the Former City Spares Site (Car Breaker) (W19). The sustainable treatment of construction, demolition and excavation (CD&E) waste at active mineral workings and the disposal of inert waste at Upper Lyde Quarry, extension and adjacent sites (W43); Shobdon Quarry and extension (W44); and, Wellington Quarry, extension and adjacent sites (W45), were also proposed in the Draft MWLP.

2.31 **Table 2.3** lists the site allocations that were included in the Draft MWLP.

Table 2.3: Site Allocations proposed in the Draft MWLP

Draft MWLP Site Allocations		
Mineral Sites	**Waste Sites**	**Strategic Employment Areas**
M03a Upper Lyde Quarry (Sand and gravel)	W05 Leominster (HWS and HWRC)	W58 Rotherwas Industrial Estate (Strategic Employment Area)
M03b Land adjacent Upper Lyde Quarry (east) (Sand and gravel)	W07 Ledbury (HWRC)	W59 Westfields Trading Estate (Strategic Employment Area)
M03d Land north east of Upper Lyde Quarry (Sand and gravel)	W10 Kington (HWRC)	W60 Three Elms Trading Estate (Strategic Employment Area)
M04 Shobdon Quarry (Sand and gravel)	W13 Former Lugg Bridge Quarry (Physical Treatment)	W61 Holmer Road, Hereford (Strategic Employment Area)
M05a Wellington Quarry (Sand and gravel)	W19 City Spares MRS (Car Breaker)	W62 Leominster Enterprise Park (Strategic Employment Area)
M05b Land adjacent Wellington Quarry (west) (Sand and gravel)	W43 Upper Lyde Quarry (M03)	W63 Southern Avenue, Leominster (Strategic Employment Area)

Draft MWLP Site Allocations		
Mineral Sites	**Waste Sites**	**Strategic Employment Areas**
M05c Land adjacent Wellington Quarry (north west) (Sand and gravel)	W44 Shobdon Quarry (M04) (Mineral site - inert waste disposal)	W64 Land between Little Marcle Road and Ross Road, Ledbury (Strategic Employment Area)
M05d Land adjacent Wellington Quarry (Dinmore Manor Estate) (Sand and gravel)	W45 Wellington Quarry (M05) (Mineral site - inert waste disposal)	W65 Model Farm, Ross-on-Wye (Strategic Employment Area)
M05g Land east of Wellington Quarry (Sand and gravel)		W66 Moreton Business Park, Moreton-on- Lugg (Strategic Employment Area)
M07a Leinthall Quarry (Crushed rock)		
M07b Land west of Leinthall Quarry (Crushed rock)		
M10a Perton Quarry (Crushed rock)		
M10b Land north west of Perton Quarry (Crushed rock)		
M12 Callow Delve (Building stone)		
M13 Black Hill Delve (Building stone)		
M16 Llandraw Delve (Building stone)		
M17 Pennsylvani Delves (Building stone)		
M18 Sunnybank Delve (Building stone)		
M20 Westonhill Wood Delve (Building stone)		
Area of Search A		
Area of Search B		
Area of Search C		
Area of Search D		

SA findings of the Draft MWLP

2.32 The SA of the Draft MWLP (December 2018) assessed 23 reasonable alternative mineral site options, four potential Areas of Search, and 17 reasonable alternative waste site options.

2.33 The SA of the Draft MWLP found that the mineral site options were likely to have mostly positive effects on the economic objectives (SA objectives **1: Employment; 2: Sustainable Economy**; and, **4: Poverty and Equality**) because they will contribute to the local economy and provide employment opportunities (albeit in a limited number). Significant positive effects were identified for all mineral sites in relation to SA objective 11: **Restoration** as they were all assumed to be restored to the same quality of land use at the end of extraction. Significant negative effects were identified for the majority of social and environmental SA objectives due to the potential for mineral extraction and transport of minerals to affect sensitive receptors, with the most significant effects likely to be experienced in relation to SA objective **3: Health, 5: Sustainable Transport, 10: Climate Change; 12: Biodiversity & Geodiversity, 16: Pollution** and **17: Soil**.

2.34 The SA found that the waste site options were also likely to have mostly positive effects with some significant positive effects identified for SA objectives **1: Employment, 2: Sustainable Economy** and **4: Poverty & Equality** because they will contribute to the local economy and provide employment opportunities (albeit in a limited number). Significant positive effects were also identified for SA objectives **8: Waste Hierarchy,** as the site allocations include operational household waste recycling centres which process waste that would otherwise be landfilled, and **11: Restoration** as they are assumed to be restored to beneficial after-uses at the earliest opportunity. In addition, significant positive effects are expected for some sites in relation to SA objective **17: Soil** as they are proposed as appropriate locations for the disposal of inert waste as part of the restoration of former mineral sites and restoration may safeguard the long-term potential of Best and Most Versatile Agricultural Land and other soil resources. Significant negative effects were identified for SA objectives **3: Health, 7: Built Environment,** and **19: Pollution** due to potential effects on residential amenity and being in close proximity to settlements. Additionally, significant negative effects are possible for SA objective **17: Soil** as a result of development on high quality agricultural land (Grade 1, 2 and 3a). Significant negative effects are expected for SA objectives **12: Biodiversity & Geodiversity** and **14: Water** due to proximity to SSSIs or SACs, and vulnerable waterbodies.

2.35 The SA of the Draft MWLP assessed the Vision, the 12 strategic objectives and the 18 policies which were proposed in the Draft MWLP. Positive effects, including significant positive effects, were identified for SA objectives **1: Employment, 2: Sustainable Economy,** and **4: Poverty & Equality** as the policies support minerals and waste development which will contribute to the local economy and provide employment opportunities. Additionally, policies support the waste hierarchy, the recovery of materials from construction and demolition waste, and the development of waste management facilities for reuse, recycling, recovery, having significant positive effects for SA objective **8: Waste.** Significant positive effects are also identified for SA objective **9: Mineral resources** as the minerals policies provide protection to mineral resources from inappropriate non-mineral development.

2.36 Likewise, policies support the reclamation of minerals and waste sites, having significant positive effects for SA objective **11: Restoration**. Significant negative effects were identified for SA objectives **5: Sustainable Transport** and **10: Climate Change** for the mineral policies which have a site-specific element (policies *M2: Sand & Gravel*; *M3: Crushed Rock*; and *M4: Sandstone*). Policy *M7: Unconventional Hydrocarbons* was expected to experience significant negative effects in relation to SA objective **10: Climate Change** as it supports the unconventional hydrocarbon development which are non-renewable fuels**.** The SA report for the Draft MWLP recommended policy *M7: Unconventional Hydrocarbons* was removed from the MWLP.

Proposed Publication Draft MWLP

2.37 The Publication Draft MWLP (November 2020) has been amended since the SA of the Draft MWLP. The Publication Draft MWLP now covers a plan period to 2041, and policies (where relevant) have been updated to reflect this, the evolved baseline, and to incorporate the findings from relevant and supporting documents (e.g. the Position Statement on Development in the River Lugg Catchment Area [Herefordshire Council, 2020]; the Level 2 SFRA [WSP, 2020]).

2.38 The Publication Draft MWLP has included some updates to the strategic policies, minerals policies and waste policies since the Draft MWLP. The strategic policies have been renamed (SP1-4), and the names of some of the minerals and waste policies have been slightly amended. Their content has also been revised to make reference to restricting hydrocarbon extraction (M1), promoting circular economy (W1), recovery of phosphorus (W1, W4 and W7), updates to waste facility capacities (W2) and achieving nutrient neutrality or betterment within the River Wye SAC (W3 and W4).

2.39 The greatest change to policy between the Draft MWLP and the Publication Draft MWLP has been the removal of policy *M7: Unconventional Hydrocarbons,* due to the Government's moratorium on fracking (announced November 2019).

2.40 With the exception of updates relating to the plan period (2041), the Vision and Strategic Objectives in the Publication Draft MWLP remain unchanged from the Draft MWLP.

2.41 The Publication Draft MWLP proposes to allocate 14 minerals sites. This compares to 20 sites allocated in the Draft MWLP. The reduction in allocated minerals sites is largely due to the amalgamation of sites M03b and M03d to form site M03c (the site previously referred to as M03c in the SA of the Draft MWLP is not allocated but is assessed as a reasonable alternative) and M05a-g to form site M05 (although site M05f is not allocated but is assessed as a reasonable alternative) The four preferred Areas of Search (A-D) remain the same in the Publication Draft MWLP as they were in the Draft MWLP. In addition, the Publication Draft MWLP proposes to allocate the same eight waste sites and nine Strategic Employment Areas that were allocated in the Draft MWLP.

2.42 A summary of the Council's reasons for the changes to policies and site allocations in the Publication Draft MWLP is provided in **Appendices D** and **E**. The SA findings for the Publication Draft MWLP site allocations are presented in **Chapter 4,** and policies in **Chapter 5**, with the combined effects of the policies and site allocations presented in **Chapter 6**.

Stage C: Preparing the Sustainability Appraisal Report

2.43 This SA Report describes the process that has been undertaken to date in carrying out the SA of the MWLP. It sets out the SA findings of the Vision, strategic objectives, policies and site allocations included in the Publication Draft MWLP as well as the reasonable alternative site options considered, highlighting any LSEs (both positive and negative, and taking into account the likely secondary, cumulative, synergistic, short, medium and long-term and permanent and temporary effects), making recommendations for improvements and clarifications that may help to mitigate negative effects and maximise the benefits of the plan as it is drafted in full.

Stage D: Consultation on the Herefordshire Minerals and Waste Local Plan and this SA Report

2.44 The SA Scoping Report for the MWLP was published in February 2017 for a five-week consultation period with the statutory consultees.

2.45 The SA of the MWLP Issues and Options Report was published in August 2017 for eight weeks.

2.46 The Draft MWLP and the SA Report were published in January 2019 for a six-week consultation period.

2.47 This SA of the Publication Draft MWLP is being published for consultation in January 2021, for a 6-week period. Consultation comments on both the Publication Draft MWLP and the SA Report will be taken into account in the next iteration of these documents.

Stage E: Monitoring the implementation of the Plan

2.48 Monitoring is focused on the significant sustainability effects that may give rise to irreversible damage and the significant effects where there is uncertainty in the SA and where monitoring would enable preventative or mitigation measures to be taken.

2.49 A monitoring framework is proposed in Chapter 8 of the Publication Draft MWLP which identifies how each draft policy would be monitored over the plan period.

2.50 Recommendations for monitoring the potential social, environmental and economic effects identified through the SA of implementing the MWLP are presented in Chapter 8 of this SA Report, drawing on the indicators proposed in the Publication Draft MWLP.

Appraisal Methodology

2.51 The policy and site options considered in preparing the Publication Draft MWLP as well as the Vision and strategic objectives, have been appraised against the 17 SA objectives in the SA Framework (see **Table 2.1**), with colour-coded symbols being attributed to each option or element of the plan to indicate its likely sustainability effects on each objective (see **Figure 2.1**).

Figure 2.1: Key to symbols and colour coding used in the SA of the Herefordshire Minerals and Waste Local Plan

++	The option or policy is likely to have a **significant positive** effect on the SA objective(s).
++/	The option or policy is likely to have a mixed effect (**significant positive** and **minor negative**) on the SA objective(s).
+	The option or policy is likely to have a **positive** effect on the SA objective(s).
0	The option or policy is likely to have a **negligible** or no effect on the SA objective(s).
	The option or policy is likely to have a **minor negative** effect on the SA objective(s).
/+	The option or policy is likely to have a mixed effect (**significant negative** and **minor positive**) on the SA objective(s).

	The option or policy is likely to have a **significant negative** effect on the SA objective(s).
?	It is **uncertain** what effect the option or policy will have on the SA objective(s), due to a lack of data.
+/	The option or policy is likely to have a **mixture of positive and negative** effects on the SA objective(s).

2.52 Where a potential positive or negative effect is uncertain, a question mark has been added to the relevant score (e.g. +? or -?) and the score is colour coded as per the potential positive, negligible or negative effect (e.g. green, yellow, orange, etc.).

2.53 The likely effects of policies and site allocations need to be determined and their significance assessed, which inevitably requires a series of judgments to be made. This appraisal has attempted to differentiate between the most significant effects and other more minor effects through the use of the symbols shown above. The dividing line in making a decision about the significance of an effect is often quite small. Where either (++) or (--) has been used to distinguish significant effects from more minor effects (+ or -) this is because the effect of policy or site allocation on the SA objective in question is considered to be of such magnitude that it will have a noticeable and measurable effect taking into account other factors that may influence the achievement of that objective. However, effects are relative to the scale of proposals under consideration.

Assumptions applied during the SA

2.54 SA inevitably relies on an element of subjective judgement. However, in order to ensure consistency and transparency in the appraisal of the policies and sites, assumptions to help guide the approach to scoring were developed and used in the appraisal. The assumptions were tailored to inform the policy assessment and the different types of minerals and waste site allocations and are presented in **Appendix E**. The assumptions used for the appraisal of site options relied primarily on the use of Geographical Information Systems (GIS) data.

Difficulties encountered and data limitations

2.55 It is a requirement of the SEA Regulations that consideration is given to any data limitations or other difficulties that are encountered during the SA process and these are outlined below.

2.56 This SA represents a strategic appraisal of the LSEs of the Publication Draft MWLP. It considers proposed mineral and waste policies and sites for Herefordshire. The assessment has been carried out at a high level, using a combination of pre-existing information, such as the Spatial Context and Sites Report (Hendeca, 2019), the Minerals Need Assessment Update (Hendeca, 2019), the Waste Need Assessment Update (Hendeca, 2019), spatial information in GIS, as well as from other specially commissioned assessments such as the HRA Screening Report (LUC, 2018), the HRA Report (LUC, 2020) and the Level 1 SFRA (WSP, 2019) and Level 2 SFRA (WSP, 2020). However, the SA is not an Environmental Impact Assessment and so detailed information about sites' constraints has not been available during the site assessment process or to extrapolate from to inform the assessment of policies. Therefore, the effects identified in the SA are presented on the basis of best available desk-based information which is not the same as the assessment of effects through detailed empirical surveys such as ecological surveys, groundwater risk assessments, etc. Furthermore, the effects identified are often qualified with uncertainty. For example, uncertain effects may be identified where there is no information on the design or scale of the operation or the type of activities undertaken within a site.

2.57 A number of potential difficulties have arisen from the scope of this SA, including in particular the different types of sites that needed to be subject to appraisal and the need to ensure that this was done in a consistent manner. In order to address this issue, detailed assumptions relating to each of the SA objectives were developed and applied during the appraisal of site options. Different assumptions were prepared for new mineral and waste sites; active mineral or operational waste sites; active mineral sites requiring a time extension; active mineral sites requiring a size extension; the disposal of inert waste at mineral sites; the areas of search; and the Strategic Employment Areas.

2.58 The HRA and SFRA were undertaken in parallel with the SA and it was necessary to revise the assessment of policies and sites to incorporate the findings of the HRA and SFRA.

2.59 The Environment Agency Flood Map for Planning (rivers and sea) does not include climate change allowances and primarily shows potential flooding from main rivers (catchments smaller than 3km^2 are not represented) which may result in smaller catchments with an associated flood risk not being identified.

2.60 Preliminary work on the SA began in February 2020 prior to the COVID-19 pandemic. This work was suspended in March 2020 and recommenced in September 2020.

2.61 No other specific data limitations or difficulties were encountered during the SA process.

Chapter 3
Sustainability Context for Minerals and Waste Development in Herefordshire

Review of Relevant Plans, Programmes and Environmental Protection Objectives

3.1 The MWLP is not being prepared in isolation and is greatly influenced by other plans and programmes and by broader sustainability objectives. The Plan needs to be consistent with international and national guidance and strategic planning policies and should contribute to the goals of a wide range of other programmes and plans. It must also conform to environmental protection legislation and the sustainability objectives established at the international, national and local levels.

3.2 Schedule 2 of the SEA Regulations requires the Environmental (SA) Report to include:

(1) "an outline of the…relationship with other relevant plans or programmes"; and

(5) "the environmental protection objectives established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation"

3.3 It is necessary to review and develop an understanding of the environmental, social and economic objectives contained within international, national and local plans and programmes that are of relevance to the MWLP so that any potential links can be built upon and any inconsistencies and constraints addressed.

3.4 This chapter summarises the relevant international and national policies, plans and programmes which should be taken into consideration during the preparation of the MWLP and its SA, as well as those plans and programmes which are of relevance at a regional and local level.

EU Exit

The European Union (Withdrawal) Act 2018 will end the supremacy of EU law in UK law, it will convert directly applicable EU legislation (in particular, EU Regulations and Decisions) as it stands at the moment of exit into domestic law, and will preserve legislation previously made in the UK to implement EU obligations.

The legislation will therefore generally have the same effect that it had before the UK left the EU, unless or until it is changed by Parliament.

Key International Plans, Programmes and Environmental Protection Objectives

3.5 At the international level, Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the 'SEA Directive') and Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') are particularly significant as they require Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA) to be undertaken in relation to the emerging MWLP. These processes should be undertaken iteratively and integrated into the production of the plan in order to ensure that any potential negative environmental effects (including on European-level nature conservation designations) are identified and can be mitigated.

3.6 Directive 2008/98/EC (Waste Framework Directive) is also of particular relevance which aims to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use.

3.7 There are a wide range of other EU Directives relating to issues such as water and air quality, most of which have been transposed into UK law through national-level policy; however the international directives have been included in **Appendix A** for completeness.

3.8 **Table 3.1** lists the international plans and programmes which are of relevance to the MWLP, and **Appendix A** provides more detail about their relevant environmental, social and economic objectives.

Table 3.1: Key international plans and programmes reviewed for the SA of the Herefordshire Minerals and Waste Local Plan

INTERNATIONAL
IPCC's Fifth Assessment Report on Climate Change (IPCC, 2014)
The Cancun Agreement – UNFCCC (2011)
Johannesburg Declaration on Sustainable Development (2002)
Aarhus Convention (1998)
Bern Convention (1979)
Bonn Convention (1979)
Ramsar Convention – Convention on Wetlands of International Importance (1971)
UNESCO World Heritage Convention (1972)
Paris Agreement (2015)
The Kyoto Protocol to the UNFCCC (1997)
EU DIRECTIVES
SEA Directive 2001
The Waste Framework Directive 2008
The Landfill Directive 1999
EU Management of Waste from Extractive Industries (2006/21/EC)
The Industrial Emissions Directive 2010

The Packaging and Packaging Waste Directive 1994
The Birds Directive 2009
The Habitats Directive 1992
The Water Framework Directive 2000
The Floods Directive 2007
The Drinking Water Directive 1998
The Bathing Water Quality Directive 2006
The Air Quality Directive 2008
The Noise Directive 2000/14/EC
EUROPEAN
EU Seventh Environmental Action Plan to 2020
EU Biodiversity Strategy to 2020
European Spatial Development Perspective (1999)
European Landscape Convention (Florence, 2002)
European Convention on the Protection of the Archaeological Heritage (Valletta, 1992)
The Convention for the Protection of the Architectural Heritage of Europe (Granada, 1985)

Key National Plans, Programmes and Environmental Protection Objectives

3.9 One of the most significant developments in terms of the policy context for the MWLP has been the publication of the revised National Planning Policy Framework (NPPF) in February 2019. The NPPF does not contain specific waste policies (contained in National Planning Policy for Waste) however it does contain policies on the sustainable use of minerals. The NPPF states that planning policies should:

> **a.** *"provide for the extraction of mineral resources of local and national importance, but not identify new sites or extensions to existing sites for peat extraction;*
>
> **b.** *so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously;*
>
> **c.** *safeguard mineral resources by defining Mineral Safeguarding Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked);*
>
> **d.** *set out policies to encourage the prior extraction of minerals, where practicable and environmentally feasible, if it is necessary for non-mineral development to take place;*
>
> **e.** *safeguard existing, planned and potential sites for: the bulk transport, handling and processing of minerals; the manufacture of concrete and concrete products; and the handling, processing and distribution of substitute, recycled and secondary aggregate material;*
>
> **f.** *set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality;*
>
> **g.** *when developing noise limits, recognise that some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction; and*
>
> **h.** *ensure that worked land is reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of mineral sites takes place".*

3.10 The NPPF is supported by Planning Practice Guidance which includes guidance on Minerals (DCLG, 2014)

and Waste (DCLG, 2015). The Local Plan must be consistent with the requirements of the NPPF.

3.11 As stated above, the detailed waste planning policies are contained in National Planning Policy for Waste (DCLG, 2014). The policies state that when preparing Local Plans, waste planning authorities should take account of a number of criteria including:

- Driving waste management up the waste hierarchy.
- Identifying the need for waste management facilities.
- Working jointly and collaboratively with other planning authorities to provide a network of facilities to deliver sustainable waste management.
- Identifying suitable sites and areas for waste management facilities in line with the proximity principle, giving priority to the re-use of previously developed land.

3.12 Also of particular relevance to the MWLP is the National Waste Management Plan for England (DEFRA, 2013), prepared to fulfil the requirement of the Waste Framework Directive, which provides analysis of the current waste management situation in England and evaluates how it will support implementation of the objectives and provisions of the Waste Framework Directive.

3.13 **Table 3.2** lists the national plans and programmes which are of relevance to the MWLP.

Table 3.2: Key national plans and programmes reviewed for the SA of the Herefordshire Minerals and Waste Local Plan

NATIONAL
Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework
Planning Practice Guidance:
DCLG (2019) Planning Practice Guidance on air quality
DCLG (2019) Planning Practice Guidance on climate change
DCLG (2019) Planning Practice Guidance on historic environment
DCLG (2014) Planning Practice Guidance on flood risk and coastal change
DCLG (2019) Planning Practice Guidance on healthy and safe communities
DCLG (2020) Planning Practice Guidance on plan-making
DCLG (2019) Planning Practice Guidance on the natural environment
DCLG (2019) Planning Practice Guidance on noise
DCLG (2019) Planning Practice Guidance on light pollution
DCLG (2014) Planning Practice Guidance on open space, sports and recreation facilities, public rights of way and local green space
DCLG (2016) Planning Practice Guidance on rural housing
DCLG (2015) Planning Practice Guidance on renewable and low carbon energy
DCLG (2019) Planning Practice Guidance on viability
DCLG (2020) Planning Practice Guidance on environmental impact assessment
DCLG (2014) National Planning Policy for Waste
DEFRA (2013) National Waste Management Plan for England
DCLG (2014) Planning Practice Guidance on Minerals
DCLG (2015) Planning Practice Guidance on Waste
HM Government (2018) Our Waste, Our Resources: A Strategy for England
DCLG (2019) Planning Practice Guidance on water supply, wastewater and water quality
DEFRA (2012) National Policy Statement for Waste Water
DEFRA (2013) National Policy Statement for Hazardous Waste

NATIONAL
HM Government (2013) Waste prevention programme for England: Prevention is better than cure – The role of waste prevention in moving to a more resource efficient economy
HM Government (2014) Aggregate Minerals Survey for England and Wales
English Heritage (2008) Minerals Extraction and the Historic Environment
Historic England (2020) Mineral Extraction and Archaeology: Historic England Advice Note 13
HM Government (2009) The UK Low Carbon Transition Plan
HM Government (2011) The Carbon Plan: Delivering our low carbon future
HM Government (2017) The Clean Growth Strategy
Natural England (2009) Green Infrastructure and the Urban Fringe
Environment Agency (2006) Water for Life and Livelihoods: A Strategy for River Basin Planning
HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment
DECC (2009) The UK Renewable Energy Strategy
DEFRA (2018) The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting: Making the country resilient to a changing climate
DEFRA (GP3) Underground, Under threat – Groundwater Protection: Policy and Practice
DCLG (2014) Planning Practice Guidance - Flood risk and coastal change
Environment Agency (2011) The National Flood and Coastal Erosion Risk Management Strategy for England
DEFRA (2008) Future Water: The Government's Water Strategy for England
Environment Agency (2009) Water for People and the Environment: Water Resources Strategy for England and Wales
DEFRA (2009) Safeguarding our Soils: A Strategy for England
DEFRA (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland
DEFRA (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services
DEFRA (2011) Securing the Future: Delivering UK Sustainable Development Strategy
DEFRA (2017) UK plan for tackling roadside nitrogen dioxide concentrations
DEFRA (2019) Clean Air Strategy
DEFRA and DfT (2017) Improving air quality in the UK: tackling nitrogen dioxide in our towns and cities: Draft UK Air Quality Plan for tackling nitrogen oxide
HM Government (2017) The UK Climate Change Risk Assessment
DECC (2014) Community Energy Strategy
DoH (2010) Healthy Lives, Healthy People: our Strategy for Public health in England
WHITE AND GREEN PAPERS
DEFRA (2011) Natural Environment White Paper – The Natural Choice: securing the value of nature
DEFRA (2011) Electricity Market Reform White Paper – Planning our Electric Future: A White Paper for Secure, Affordable and Low-Carbon Electricity
DEFRA (2011) Water White Paper – Water for Life
HM Government (2017) Industrial Strategy: Building a Britain fit for the future
DfT (2004) The Future of Transport White Paper 2004: A network for 2030

NATIONAL
NATIONAL LEGISLATION
Environment Bill 2020
Localism Act 2011
Flood and Water Management Act 2010
Climate Change Act 2008
The Countryside and Rights of Way Act 2000
The Natural Environment and Rural Communities Act 2006 – Section 41: list of habitats and species of principal importance in England 2008
Planning (Listed Buildings and Conservation Areas) Act 1990
REGULATIONS
The Conservation of Habitats and Species Regulations (2010) (as amended)

Key Local Plans, Programmes and Environmental Protection Objectives

3.14 While not a requirement of the SEA Regulations, at the sub-regional and local levels there are also a wide range of plans and programmes that are specific to Herefordshire which provide further context for the MWLP. These plans and programmes relate to issues such as the economy, transport, climate change and green infrastructure. The following paragraphs present a high-level summary of some notable plans that are of relevance to the MWLP.

Herefordshire Local Plan - Core Strategy

3.15 The Minerals and Waste Local Plan, the Hereford Area Plan DPD, the Travellers' Sites DPD, the Rural Area Site Allocations DPD, and Neighbourhood Development Plans (NDPs) will sit alongside the adopted Herefordshire Local Plan - Core Strategy (adopted 2015) as part of the statutory Development Plan for Herefordshire. The Core Strategy provides the strategic planning framework for the county's future development needs up to 2031. The Core Strategy requires a minimum of 16,500 homes between 2011 and 2031, with at least 6,500 new homes in Hereford and 5,300 homes in rural areas. NDPs will allocate land for the relevant housing need in their area and those areas without NDPs will have land allocated through the Rural Area Site Allocations DPD. The Core Strategy sets a target of 148ha of new employment land over the plan period.

Waste Management Strategy for Herefordshire and Worcestershire 2004-2034

3.16 The aim of the joint Waste Management Strategy for Herefordshire and Worcestershire 2004-2034 (2011) is to decrease waste production and increase the recovery of value from waste, by treating it as a resource. The strategy relates to local authority collected waste only and is guided by a number of principles, including commitment to the waste hierarchy and waste prevention, minimising the use of landfill and consideration of social, environmental and economic impacts.

Herefordshire Local Flood Risk Management Strategy

3.17 The Herefordshire Local Flood Risk Management Strategy (2017) sets out the framework for how the Council will work with other local flood risk management authorities and the general public to better understand and manage existing and future flood risks from all potential sources of flooding.

Herefordshire Minerals and Waste Local Plan Strategic Flood Risk Assessment

3.18 During the preparation of the Herefordshire Local Plan Core Strategy, a Strategic Flood Risk Assessment (SFRA) was prepared in 2009. An update to the SFRA was prepared in 2015 to specifically assess risks to strategic development sites. The Council has produced a SFRA of the MWLP - Level 1 in 2019 and Level 2 SFRA in 2020. As the previous SA of the Draft MWLP was undertaken in late 2018, this is the first opportunity for the findings from the SFRAs to be incorporated into the SA.

3.19 The Level 2 SFRA[8] builds on the Herefordshire Level 1 SFRA[9] providing a more detailed assessment of flood risk at a number of strategic development sites identified by the Council in the Draft MWLP that may be at risk of flooding. It considers their vulnerability in accordance with the requirements of the Sequential and Exception Tests. The sites assessed in detail in the Level 2 SFRA include:

- Holmer Road, Hereford (W61)
- Wellington Quarry (M05 and W45) and Moreton Business Park, Moreton-on-Lugg (W66)
- Former Lugg Bridge Quarry (W13)
- Leominster Household Waste Site (W05)
- Westfields Trading Estate (W59)
- Southern Avenue, Leominster (W63)
- Land between Little Marcle Road and Ross Road, Ledbury (W64)
- Leominster Enterprise Park (W62)
- Three Elms Trading Estate (W60)

3.20 General policy recommendations for 17 other sites (except mineral site allocations M12, M17 and M18; the four Areas of Search; and the four reasonable alternative mineral site options) that have not been subject to detailed assessment are also outlined in the Level 2 SFRA.

3.21 The SFRA states that all sites assessed in the SFRA pass the Sequential Test and are appropriate for proposed development as set out in the MWLP, noting that a sequential approach may still need to be applied to steer development to areas at lowest flood risk. Where flood risks areas have been identified and the Exception Test is required, it is likely that this can be best managed through the appropriate location of more vulnerable development in areas at lower flood risk and, where required, there are feasible mitigation measures that can be implemented to manage these risks without increasing flood risk elsewhere. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and shallow infiltration and attenuated discharge to nearby watercourses.

Herefordshire Local Transport Plan 4 (LTP4) 2016-2031

3.22 The Herefordshire Local Transport Plan 4 was adopted in May 2016 and covers the period 2016-2031. It sets out the Council's strategy for supporting economic growth, improving health and wellbeing and reducing environmental impacts of transport. Objectives of the plan include ensuring transport infrastructure enables economic growth.

Invest Herefordshire – Herefordshire's Economic Vision

3.23 Invest Herefordshire – Herefordshire's Economic Vision identifies a series of private sector investment opportunities that will contribute to the growth of the county. It also sets out what the public sector will provide in terms of creating the conditions to encourage economic growth. The economic vision has four key roles: (1) to support the growth of the Herefordshire economy by identifying priority projects; (2) to attract investment to Herefordshire and guide it within the county; (3) to raise the profile of Herefordshire and the investment opportunities; and (4) to provide Herefordshire with clear priorities for negotiations.

Wye Valley AONB Management Plan 2015-2020

3.24 The Wye Valley AONB Management Plan 2015-2020 (2016) is intended to provide guidance and strategic objectives to support and steer positive landscape change. Aims include conservation and enhancement of landscape, biodiversity and heritage assets as well as guiding sustainable land management and development. An updated version for the plan period 2020-2025 is currently in preparation, having completed public consultation in January 2020.

Malvern Hills AONB Management Plan 2019-2024

3.25 The purpose of the Malvern Hills AONB Management Plan 2019-2024 (2019) is to help all those involved in managing the AONB to conserve its special qualities, manage pressures on these qualities and improve the AONB for current and future generations of people who live in and visit the area. Aims include conserving the area's natural capital, safeguarding people from environmental health risks, stimulating appropriate resource-efficient, low-carbon economic and social development, reducing carbon emissions, pursuing an integrated approach to sustainable land management and to support effective partnership working.

Brecon Beacons National Park Management Plan 2015-2020

3.26 The Brecon Beacons National Park Management Plan 2015-2020 (2016) establishes six management themes to: (1) manage park landscapes to maximise conservation and public benefits; (2) conserve and enhance biodiversity; (3) provide opportunities for outdoor access and recreation; (4) raise awareness and understanding of the Park; (5) build and

[8] Herefordshire Council (2020) Herefordshire Mineral and Waste Local Plan Level 2

[9] Herefordshire Council (2019) Herefordshire Mineral and Waste Local Plan Level 1 [online] https://www.herefordshire.gov.uk/directory-record/2111/strategic-flood-risk-assessment

maintain sustainable communities, towns and villages; and (6) support sustainable economic development.

River Wye SAC Nutrient Management Plan (2014)

3.27 The 2010 HRA for the Herefordshire Local Plan - Core Strategy identified LSEs on water quality as a result of the plan at that stage. In light of this result, Herefordshire Council established a Water Steering Group comprising officers from the Council, Natural England, the Environment Agency and Dwr Cymru Welsh Water.

3.28 The key outcome of the Water Steering Group discussions was extensive joint working on the production of a River Wye SAC Nutrient Management Plan (NMP). The NMP sets out measures which could be implemented in order to ensure the favourable conservation status of the SAC in respect of phosphate levels as soon as possible and at the latest by 2027 taking into account the existing river phosphate levels and existing water discharge permits. The NMP also seeks to identify actions that would enable additional development (beyond existing consents) to proceed during the period 2013 to 2031 of the type and amount, and in the locations specified in or pursuant to the Herefordshire Core Strategy and other relevant development plans.

3.29 The NMP comprises three parts: Evidence Base, Options Appraisal and Action Plan. **The NMP identified that phosphate loss to watercourses is a particular issue in rural catchments with a high degree of agricultural activity, such as in the upper River Wye and River Lugg sub catchments.**

3.30 The Rivers Wye, Lugg, Teme and Clun are identified as Sites of Special Scientific Interest and the River Wye, including part of the River Lugg, part of the River Clun and Downton Gorge on the River Teme are also designated as Special Areas of Conservation. The water quality of Herefordshire's main rivers and their tributaries is of strategic importance. High levels of phosphates have been identified as a particular problem. All 19 natural rivers in the Wye catchment and 24 natural rivers in the Arrow, Lugg and Frome catchment failing to achieve good chemical status (Water Framework Directive River Waterbody Catchments 2019 Cycle 2) (in the 2016 Cycle 2 all rivers achieved good chemical status). In the Wye catchment only one river is recorded as being of good ecological status, whilst 15 are of moderate (14 in the 2016 Cycle 2) and three are of poor status (four in the 2016 Cycle 2). In the Arrow, Lugg and Frome catchment one river has achieved good ecological status, 13 are of moderate ecological status, seven are of poor and three are of bad status. The main reason for not achieving good status is agriculture and rural land management[10].

3.31 In November 2018, judgement was handed down from the Court of Justice of the European Union in the case of Cooperatie Mobilisation (Joined Cases C-293/17 and C-294/17, the 'Dutch Case'). The Dutch Case concluded that where a site is failing in its water quality objectives, and is therefore classed as being in an unfavourable condition, there is limited scope for the approval of additional damaging effects and that the future benefit of mitigation measures cannot be relied upon at Appropriate Assessment, where those benefits are uncertain at the time of the assessment.

3.32 In response to this judgement, and discussion with Natural England, the council concluded that the measures set out in the River Wye SAC NMP could no longer be relied upon and issued three new documents relevant to development that could affect the River Wye SAC. At the time of writing the MWLP, the most recent versions of these documents were published in March 2020 and titled:

- Position Statement – Development in the River Lugg Catchment Area
- Guidance Note and Checklist for applicants/agents relating to HRA and planning applications; and
- Frequently Asked Questions Relating to the Development in the River Lugg Catchment.

Interim Approach

3.33 There remains potential for a positive appropriate assessment to enable development to proceed in the River Lugg catchment, on Natural England's advice, where it can be demonstrated that development is **nutrient neutral** (where avoidance / mitigation measures included in the plan or project counterbalance any phosphate increase from the plan or project) or would lead to '**betterment**'. Proposals will need to provide appropriate evidence of this.

3.34 The MWLP incorporates the requirements of these documents in policy designed to help deliver nutrient neutrality or betterment within the River Wye SAC.

Water for Life: The Severn River Basin District Management Plan

3.35 The purpose of the Water for Life: The Severn River Basin District Management Plan is to meet the requirements of the Water Framework Directive by:

[10] Environment Agency, 2020. Catchment Data Explorer, available at: http://environment.data.gov.uk/catchment-planning/OperationalCatchment/3549/Summary http://environment.data.gov.uk/catchment-planning/OperationalCatchment/3014 accessed 22/10/2020

- Preventing deterioration in the status of aquatic ecosystems, protecting them and improving the ecological condition of waters.
- Aiming to achieve good status for all waterbodies by 2021 or 2027.
- Meeting the requirements of Water Framework Directive protected areas.
- Promoting sustainable use of water as a natural resource.
- Conserving habitats and species that depend directly on water.
- Progressively reducing or phasing out the release of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment.
- Progressively reducing the pollution of groundwater and prevent or limit the entry of pollutants.
- Contributing to mitigating the effects of floods and droughts.

3.36 **Table 3.3** lists the local plans and programmes which are of relevance to the MWLP.

Table 3.3: Key local plans and programmes reviewed for the SA of the Herefordshire Minerals and Waste Local Plan

LOCAL
Herefordshire Council (2015) Herefordshire Core Strategy 2011 – 2031
Hendeca (2019) Mineral Needs Assessment 2019
Hendeca (2019) Waste Needs Assessment 2019
Herefordshire Council (2011) Waste Strategy for Herefordshire and Worcestershire 2004-2034
Herefordshire Council (2016) Herefordshire Local Transport Plan 4 2016-2031
Herefordshire Council (2005) Biodiversity Action Plan
Herefordshire Council (2017) Invest Herefordshire – Herefordshire's Economic Vision
Malvern Hills AONB Partnership (2019) Malvern Hills AONB Management Plan 2019-2024
Wye Valley AONB Partnership (2015) Wye Valley AONB Management Plan 2015-2020
A Management Plan for the Brecon Beacons National Park 2015-2020
Environment Agency & Natural England (2014) River Wye SAC Nutrient Management Plan (NMP) and March 2020 documents relating to the River Lugg Catchment Area
Environment Agency (2015) Water for life and livelihoods: The Severn River Basin District Management Plan
Herefordshire Council (2017) Local Flood Risk Management Strategy
Herefordshire Council (2009) Strategic Flood Risk Assessment for Herefordshire Herefordshire Council (2015) Strategic Flood Risk Assessment – Update Herefordshire Council (2019) Strategic Flood Risk Assessment for Herefordshire (Level 1) Herefordshire Council (2020) Herefordshire Minerals and Waste Strategic Flood Risk Assessment (Level 2)
Environment Agency Wales (2010) The Wye and Usk Catchment Flood Management Plan
Environment Agency Wales (2009) The Severn Catchment Flood Management Plan
Environment Agency Wales (2016) River Wye Abstraction Licencing Strategy
Herefordshire Council (2010) Green Infrastructure Strategy Herefordshire
Worcestershire County Council (2016) Emerging Minerals Local Plan
Powys County Council (2011) Powys Local Development Plan 2011 - 2026
Shropshire Council (2018) Local Development Framework 2006-2026 Adopted Core Strategy
Monmouthshire County Council (2014) Adopted Local Development Plan 2011 - 2021

LOCAL
Worcester City Council Malvern Hills District Council and Wychavon District Council (2016) South Worcestershire Development Plan
Gloucestershire County Council (2012) Gloucestershire Waste Core Strategy

Baseline Information

3.37 Schedule 2 of the SEA Regulations requires information to be provided on:

(2) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan.

(3) The environmental characteristics of areas likely to be significantly affected.

(4) Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC on the conservation of wild birds and the Habitats Directive.

3.38 The term 'baseline information' refers to the existing environmental, economic and social characteristics of the area likely to be affected by the Plan, and their likely evolution without implementation of the Plan. Baseline information provides the basis for predicting and monitoring the likely effects of a plan and helps to identify existing problems in the plan area.

3.39 The full baseline information is presented in **Appendix C**. The SEA Regulations only requires 'environmental characteristics' to be identified, therefore, to satisfy the requirements of SA, this has been extended to identify both social and economic baseline characteristics. Similarly, rather than only identifying 'existing environmental problems', to satisfy the requirements of SA, social and economic problems are also identified and are subsequently referred to as 'key sustainability issues' (see **Table 3.4**). In order to satisfy the requirements of Schedule 2, the following information is presented for each baseline topic:

- Quantified information on the current state and characteristics of the topic within Herefordshire;
- Comparators and trends; and,
- Key sustainability issues.

3.40 Baseline information presented in the SA of the Draft MWLP Report has been revised and updated to make use of recently available information sources, most notably the Mineral and Waste Need Assessments Updates completed by Hendeca in 2019; the Strategic Flood Risk Assessments of the MWLP completed by WSP in 2019 and 2020; the Appropriate Assessment of the MWLP completed in 2020; and the Council's Position Statement on Development in the River Lugg Catchment Area in March 2020. A brief overview of the minerals and waste context plus environmental, social and economic characteristics of Herefordshire is outlined in the following paragraphs.

Minerals and Waste Context

3.41 Mineral resources in Herefordshire are relatively limited in range, primarily consisting of aggregates for use in construction but also a small amount of building stone. The commercially exploitable minerals available for extraction from within Herefordshire include sand, gravel, crushed rock, and sandstone. Coal was formerly worked at two locations – Wyre Forest Coalfield and Forest of Dean Coalfield. There are currently eleven permitted mineral workings in Herefordshire. There will be a need for additional reserves of sand and gravel to be permitted to meet demand from 2027 onwards. There may be a need for additional reserves of crushed rock during the lifetime of the MWLP to continue to meet demand from 2027 onwards. There are currently no industrial processes in Herefordshire which are known to produce secondary aggregates[11]. Recycled aggregates are currently being produced within Herefordshire, principally at the CD&E waste recovery facility at Former Lugg Bridge Quarry.

3.42 The amount and type of waste produced, and the ways in which it is managed, partly reflects the environmental, social and economic characteristics of the area. Concentrated populations and commercial/industrial activities, as are found in Hereford and the main county towns are the largest producers of waste, and this is generally reflected in the pattern of waste management facilities within Herefordshire. Anaerobic digestion and biological treatment facilities are dispersed around the county, reflecting its agricultural sector. According to the WNA 2019[12], permitted facilities located in Herefordshire managed 460,000 tonnes of waste in 2018, compared to just over 300,000 in 2013. The single largest tonnage is municipal waste (principally wastes from households); representing 42% to 48% of the wastes managed at permitted facilities in Herefordshire between 2015

[11] Hendeca, 2019. Minerals Need Assessment 2019

[12] Hendeca, 2019. Waste Need Assessment 2019

and 2018. The second largest tonnage is formed by construction and demolition wastes (29%) followed by agriculture and processing wastes (20% in 2018). All the other wastes added together still only comprise about 6% to 11% of all wastes managed at the permitted facilities in Herefordshire.

3.43 The majority (90%) of waste received at permitted facilities in Herefordshire originated in Herefordshire. There are 34 waste management facilities operating in Herefordshire.

Environmental Characteristics

3.44 Herefordshire is a largely rural county and as such has a rich biodiversity offering. There are four sites of international importance for nature conservation within Herefordshire, which are designated pursuant to Directive 92/43/EEC[13]: the River Wye Special Area of Conservation (SAC); the Wye Valley Woodlands SAC; the Downton Gorge SAC; and, the River Clun SAC. There are three National Nature Reserves, seven Local Nature Reserves, 79 Sites of Special Scientific Interest, and 685 Local Wildlife Sites.

3.45 There are two designated AQMAs in Herefordshire – the Hereford AQMA and the Bargates Leominster AQMA.

3.46 There are a number of groundwater Source Protection Zones within Herefordshire to ensure that rivers and aquifers are protected from pollution and are principally located at the River Lugg and River Wye. Fluvial flooding (from rivers) is the largest single source of flooding in Herefordshire, based on notable flood events recoded from 1931 to 2018. The majority of fluvial flood risk in Herefordshire is associated with the main rivers that flow through the country, with the most extensive floodplains attributable to the River Teme, River Lugg, River Arrow, River Wye, River Frome, River Dore, River Leadon and Worm Brook. The second most common cause is flooding from surface water. There are limited records of groundwater flooding, and the majority of sewer flooding is generally in urban areas.

3.47 Herefordshire possesses a rich historic environment which is reflected in the number of designated heritage assets – the Hereford Area of Archaeological Importance; 64 Conservation Areas, two are listed on the Heritage at Risk Register; 5,938 Listed Buildings in Herefordshire, 34 of which are on the Heritage at Risk Register; 265 Scheduled Monuments, 25 of which are on the Heritage at Risk Register; and, 25 Registered Parks and Gardens, of which none are considered to be at risk.

3.48 The county has significant areas of landscape importance including the Wye Valley AONB and the Malvern Hills AONB, and areas of high landscape sensitivity around Hereford. The Shropshire Hills AONB lies almost adjacent to the north-western part of Herefordshire, near Leintwardine.

3.49 The majority of Herefordshire consists of grade 2 and grade 3 agricultural land.

Social Characteristics

3.50 The latest population estimate for Herefordshire, the predicted mid-2019 population estimate was 192,800, of which 95,500 were male and 97,300 were female[14]. Just under a third of the county's resident's (61,400) live in Hereford city with one-fifth of the population living in the three largest market towns – including Ross (11,400 people) Leominster (12,200) and Ledbury (10,100). Just over half of the residents (100,500) live in areas classified as rural, with around two in five (80,300) living in the most rural 'village and dispersed[15]. The population projections for Herefordshire predict that the population will increase to 201,200 by 2031[16]. Herefordshire is predicted to experience a demographic change with an increasing elderly population.

3.51 In 2019, Herefordshire contained 83,765 dwellings, of which 33,917 (40.5%) were located in Hereford City[17]. Approximately 68% of dwellings in Herefordshire are owner occupied, which is slightly higher than the West Midlands (64.9%) and England (63.3%) averages. The median house price in Herefordshire in August 2020 was £247,163[18]. Herefordshire has the worst housing affordability ratio in the West Midlands[19].

3.52 Overall levels of deprivation are low in the county however, according to the English Indices of Deprivation 2019[20], Herefordshire contains one Lower-layer Super Output Area (LSOA) in the 10% most deprived in the country (Herefordshire 017D within the Newton Farm ward). Eight LSOAs are within the 20% most deprived in the country (two within the Hinton & Hunderton ward and one within the Ross North, Leominster South, Leominster North and Rural, Leominster East, Red Hill and Newton Far) with an additional five LSOAs within the 30% most deprived in the country (one

[13] European Union Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora
[14] Mid-2019 population estimates (by single year of age and sex) for Herefordshire Council [online] https://understanding.herefordshire.gov.uk/population/ accessed 20/10/2020
[15] Herefordshire Council (2019) around the country [online]. Available at: https://understanding.herefordshire.gov.uk/population/population-around-the-county/Population, accessed 07/02/2020
[16] Growing Population (2019) Future Trends [online] Available at: https://understanding.herefordshire.gov.uk/population/growing-population/
[17] BRE (2019). Integrated Dwelling Level Housing Stock Modelling and Database for Herefordshire Council [online] Available at: https://understanding.herefordshire.gov.uk/media/1875/bre-herefordshire-integrated-housing-stock-modelling-report-final-002.pdf
[18] UK House Price Index [online] Available at: http://landregistry.data.gov.uk/app/ukhpi
[19] Ibid.
[20] The English Indices of Deprivation (2019), DCLG [online]. Available at: http://dclgapps.communities.gov.uk/imd/iod_index.html#

within the Central ward, one within the Bromyard West ward one within the Saxon Gate ward, one within the Red Hill ward and , and one within the Newton Farm ward).

3.53 Life expectancies for both men and women are higher than the national average, at 83.7 years for women and 79,7 years for men[21]. Health inequalities exist, as the average life expectancy for men in the least deprived areas is 9.5 years more than those in the most deprived areas. Women in the least deprived areas can expect to live 7.7 years longer than those in the most deprived areas[22].

3.54 There are over 100 publicly funded primary, secondary and special schools in Herefordshire[23]. In September 2020, it is hoped that a new university will open in Hereford: the New Model in Technology and Engineering (NMiTE).

3.55 Herefordshire has a range of cultural and leisure opportunities, including Eastnor Castle and Hampton Court Castle, a number of houses and gardens to visit, as well as its characteristic market towns. There is a network of public rights of way (PROW) across the countryside including promoted routes such as the Wye Valley Walk and the Three Rivers Ride. The Offa's Dyke Path, a National Trail, passes through the county near Kington. National Cycle Network (NCN) routes 44, 46, 426 and 423 are present within the county. The county also contains Queenswood Country Park near Bodenham.

Economic Characteristics

3.56 The latest labour market statistics[24] from July 2019 to June 2020 show that 98,300 people in Herefordshire were employed, accounting for 82.7% of the population, which is above the national average of 79.4%. The three main occupations in Herefordshire in the same period were professional occupations (19.2%), skilled trades and occupations (15.0%), associate professional and technical (15.5%) and managers, directors and senior officials (13.5%). The county's largest employment industries are wholesale and retail trade (repair of motor vehicles and motorcycles) (17.6%), and human health and social work activities (16.2%). The percentage of people employed in the motor vehicle repair and the human health and social work industry is higher in Herefordshire than in the West Midlands (16.7% and 13.6% respectively) and the UK as a whole (15.2% and 13.2% respectively). Conversely, the number of people employed in professional, scientific and technical activities (6.1%) is below the regional (7.0%) and national (8.7%) averages.

3.57 The proportion of people who are unemployed is 2.8% of the population which is the lower than the regional average (4.7%) and the national average (3.9%).

3.58 In 2015, 6.86 million people visited Herefordshire, 2.65m overnight visitors and 4.21m day visitors who between them contributed £442.81 m to the local economy. This supports about 6,688 full time equivalent jobs in the tourism industry. The main retail and cultural centre of Herefordshire is Hereford city, although market towns also play a key role.

3.59 The primary road network in Herefordshire generally radiates out from Hereford and Leominster. Hereford is a hotspot for congestion in the county, particularly around the main river crossing of the A49 and the bridge at St Martin's Street, which is controlled by traffic lights[25]. As part of the Hereford Transport Package, the City Link Road was opened in December 2017 in Hereford which links Commercial Road and Edgar Street. There are no commercial airports within Herefordshire, with the nearest airports being at Birmingham and Cardiff. There are four train stations within Herefordshire at Hereford, Leominster, Colwall and Ledbury.

Key Sustainability Issues and Likely Evolution without the Plan

3.60 The set of key sustainability issues for Herefordshire presented in the SA of the Draft MWLP has been updated. It is also a requirement of the SEA Regulations that consideration is given to the likely evolution of the environment if the MWLP is not implemented. This analysis is presented in **Table 3.4** in relation to each of the key sustainability issues.

[21] Ibid.
[22] Ibid.
[23] Herefordshire Council (2019) School Directory [online] Available at: https://www.herefordshire.gov.uk/directory/18/school_directory
[24] Nomis (2020) Labour Market Profile – Herefordshire. Available at: https://www.nomisweb.co.uk/reports/lmp/la/1946157169/report.aspx?town=herefordshire#tabempunemp
[25] Herefordshire Council (2016) Herefordshire Council Transport Plan 2016 – 2031 [online] Available at: https://www.herefordshire.gov.uk/download/downloads/id/2912/local_transport_plan_2016-2031_strategy.pdf

Table 3.4: Key sustainability issues and likely evolution without the Herefordshire Minerals and Waste Local Plan

Key sustainability issue	Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan
Mineral Resources	
There may be a need for additional reserves of sand and gravel working, crushed rock and building stone during the lifetime of the Minerals and Waste Local Plan to continue to meet demand. However, the scenarios presented in the MNA Update 2019 have produced varying forecasts of demand, reflecting the extent of uncertainties in minerals data. Recycled aggregates could have an increasingly important role to play in reducing reliance on imports of aggregates and supporting the delivery of the Circular Economy, particularly sand and gravel. The exploration, appraisal or extraction of hydrocarbons within the county is not reasonably expected to take place in the short to medium term and unlikely within the plan period.	In the absence of the MWLP, which will allocate appropriate sites for mineral extraction, it is likely that there will be an insufficient supply of minerals in Herefordshire to meet demand, thereby increasing reliance on imports of aggregates. Furthermore, without the Plan, it is also likely that mineral developments will be sited in inappropriate locations resulting in negative social, economic and environmental effects.
Waste	
Over the last four years there has been a notable increase in the capacity and waste inputs to permitted facilities in Herefordshire. While there is a range of waste management collection, re-use and recycling capacity permitted in Herefordshire addressing a variety of wastes, there are no residual waste management facilities. As a result, there is a reliance on such facilities outside the county to process the proportion of 'local authority collected waste' that is not recycled, composted or reused. Waste generation is expected to increase if households (and population) are projected to grow. This has different impacts on the various waste streams identified in Herefordshire: • There is the risk of potential pressure on the current contracted capacity of the materials recovery facility at Norton to process additional LACW waste, particularly towards the end of the Plan period. • Additional commercial and industrial (C&I) waste management capacity may be required, although this could be provided within a single facility or through a small number of facilities operating on an industrial estate. • Assuming a 90% recovery target for non-hazardous Construction & Demolition (C&D) wastes, strategic locations for the future management of non-hazardous construction and demolition (CD&E) waste will need to be considered. • Based on the low level of generation, there would not appear to be a strategic need for agricultural wastes, low level radioactive waste and new hazardous waste management capacity within Herefordshire. • There are no insurmountable constraints identified in the period up to 2041 in relation to wastewater.	In the absence of the MWLP, which will allocate appropriate sites for sustainable waste management, it is likely that the current waste management facilities will reach full capacity, particularly in relation to LACW. Furthermore, without the Plan, it is also likely that waste and mineral developments will be sited in inappropriate locations resulting in negative social, economic and environmental effects.
Climate change	
Herefordshire is likely to experience more extreme impacts as a result of climate change – wetter winters with greater incidences of	Despite policies in the National Planning Policy Framework (NPPF), the National Planning Policy for

Key sustainability issue	Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan
flooding, and warmer, drier summers with greater incidences of low flow rivers (during the summer months). The predicted dry, hot summers will cause problems of low flows for some of the rivers in the area which will increase demand for water potentially affecting availability for minerals operations. Extreme weather events may also increase disruption to supply chains, infrastructure and transport of minerals and waste. However, climate change also presents a number of opportunities - milder winters should reduce the costs of heating homes and other buildings, helping to alleviate fuel poverty and reducing the number of winter deaths from cold. In addition, UK agriculture and forestry may be able to increase production with warmer weather and longer growing seasons.	Waste (NPPW) and the adopted Herefordshire Core Strategy, in the absence of the MWLP it is likely that contributions to climate change from minerals and waste developments in Herefordshire will not be appropriately controlled and mitigated.
Biodiversity and geodiversity	
Herefordshire contains many areas of high ecological value including sites of international and national importance which are under pressure from farming, forestry and new development. Key environmental problems/threats identified in relation to European Sites likely to be affected by the MWLP include decreasing quality of water, habitat fragmentation, the spread of invasive species and diseases, pressure from public access, poor site and game management, structural deterioration of roost sites, siltation, physical modification, nitrogen deposition, inappropriate scrub control and undergrazing. In light of these pressures, there is a need for biodiversity net gain where any damages to biodiversity are balanced by at least equivalent gains for biodiversity.	Although there is a high level of protection afforded to internationally and nationally designated nature conservation sites within the NPPF, the NPPW and the adopted Core Strategy (Policy LD2), the implementation of the MWLP can help to conserve biodiversity by directing mineral and waste developments away from sensitive locations. Furthermore, the MWLP can also help to enhance biodiversity (and achieve biodiversity net gain) through the restoration of land at former waste and mineral sites to an after-use including accessible greenspace. Without the MWLP it is more likely that environmental designations in the county could be adversely affected by poorly planned minerals and waste developments or with less stringent mitigation measures applied.
Air quality	
Poor air quality is experienced in certain parts of Herefordshire due to high concentrations of nitrogen oxide, and two AQMAs have been declared in Hereford and Leominster.	In the absence of the MWLP which will support sustainable transport measures and aim to reduce emissions from transport of waste and minerals, air quality in Herefordshire is more likely to be adversely affected as a result of less stringent mitigation or poorly planned minerals and waste developments.
Water resources and flooding	
Significant improvements to water quality in the country are required to meet the target of 'Good Chemical Status' and 'Good Ecological Status' of rivers by 2027, as required by the Water Framework Directive. In Herefordshire, phosphate loss to watercourses is a particular issue in rural catchments with a high degree of agricultural activity, such as in the Wye catchment and Arrow, Lugg and Frome catchment, where all rivers in these catchments are failing to achieve good chemical status and the majority are not achieving good ecological status (mostly of moderate, poor or bad status) due to agriculture and land management processes. For the River Wye SAC, this means that it is not currently achieving its conservation objectives.	Policy SD3 of the adopted Core Strategy states that development proposals should not lead to the deterioration of EU Water Framework Directive water body status. Policy SS7 seeks to minimise the risk of flooding and to make use of sustainable drainage systems. There is an existing Nutrient Management Plan for the River Wye SAC, which sought to identify actions that would enable additional development (beyond existing wastewater discharge consents) to proceed. However, due to the phosphate targets still being exceeded this has been updated by new documents published by the Council in March 2020 (Position Statement and

Key sustainability issue	Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan
Herefordshire is affected to varying degrees by fluvial and surface water flooding which is primarily associated with the River Wye. The effects of climate change may increase the incidence of flooding within the county. Although there are a number of Source Protection Zones in Herefordshire, groundwater is vulnerable to contamination and pollution from the storage, treatment and processing of waste and mineral exploitation.	FAQs on Development in the River Lugg Catchment Area, and a Guidance Note and Checklist relating to HRA and planning applications). Therefore, there is potential for phosphate levels associated with new development to be improved even without the MWLP. However, the MWLP incorporates the requirements of these documents in policy designed to help deliver nutrient neutrality or betterment within the River Wye and River Lugg catchments and should therefore help to improve phosphate levels. The MWLP will also take flooding into account in the allocation of sites for mineral and waste developments and so this issue will be less well addressed without the implementation of this document. Furthermore, in the absence of the MWLP, there is unlikely to be the opportunity to increase flood storage capacity through the restoration of mineral sites to artificial lakes.
Soil	
The majority of Herefordshire consists of best and most versatile agricultural land, which could be lost to development.	Policy SS7 of the adopted Core Strategy seeks to protect the best agricultural land where possible. The HWMLP will prioritise the co-location of similar or related facilities on existing waste and mineral sites or previously developed sites in preference to greenfield locations. Without the implementation of the HWMLP this issue would be less well addressed.
Historic environment	
There are areas of significant historical importance in Herefordshire and aesthetic quality, settings and important views should be preserved and enhanced. These are continuously facing pressures for change. There are 34 Listed Buildings, 25 Scheduled Monuments, and two Conservation Areas on the Heritage at Risk Register.	Policy LD4 of the adopted Core Strategy seeks to protect, conserve and enhance heritage assets and their settings. The MWLP offers the opportunity to allocate mineral and waste sites following consideration of their impacts on the historic environment through the SA. Without the implementation of the MWLP this issue may be less well addressed.
Landscape	
The county has significant areas of landscape importance including the Wye Valley AONB and the Malvern Hills AONB, and areas of high landscape sensitivity around Hereford.	There is a high level of protection afforded to nationally designated landscapes within the NPPF. Policy LD1 of the adopted Core Strategy seeks to conserve and enhance the natural, historic and scenic beauty of important landscapes and features. In the absence of the MWLP there is potential for new mineral and waste developments to be located in sensitive areas leading to negative impacts on valued landscapes.
Population	
The age structure of the population currently shows a higher than average level of retired people. This will have implications for the economy, service provision, accommodation and health.	It is likely that the age structure and proportion of people living in rural areas will continue with or without the implementation of the MWLP as these issues are more likely to be addressed through

Key sustainability issue	Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan
Large proportion of the population living in rural areas.	policies in the adopted Core Strategy and other Local Plan documents.
Housing	
There need for affordable housing, particularly in Hereford, due to average house prices being higher than the regional and national averages.	The MWLP can ensure sufficient resources are available to meet housing requirements through extraction from existing and new minerals sites. Without the implementation of the MWLP this issue may be less well addressed.
Social inclusion and deprivation	
While the overall level of deprivation is low in the county, there are pockets of high deprivation in Hereford City. A higher than average number of households are considered to be fuel poor in the county.	The adopted Core Strategy contains policies for employment development which will help to address deprivation. The MWLP will allocate waste and mineral development sites which will provide opportunities for employment. Without the implementation of the MWLP this issue may be less well addressed.
Health	
Health inequalities exist in Herefordshire between the least and most deprived areas of the county. The population of Herefordshire performs generally better than the averages for nationally against the majority of health indicators. However, childhood obesity prevalence in Herefordshire is in line with the regional and national averages, and alcohol specific hospital stays and smoking levels for under 18s is worse than the average for England.	The adopted Core Strategy contains policies relating to the health of the residents of Herefordshire. The MWLP aims to ensure that mineral and waste developments protect the health, wellbeing, safety and amenity of people and communities in and around Herefordshire. Without the implementation of the MWLP this issue may be less well addressed.
Culture, leisure and recreation	
Herefordshire has a range of cultural and leisure opportunities, and many visitors to Herefordshire come for its countryside. Improve provision and access to recreational resources (be that to linear routes, open space, or recreational facilities).	Policy OS1 of the adopted Core Strategy seeks to ensure there is a network of accessible, high quality open spaces and recreation facilities in Herefordshire. The MWLP aims to ensure that mineral and waste developments provide opportunities to improve health and amenity through delivery of green infrastructure, enhanced public rights of way and improved access to recreation as part of the development and restoration of sites. Without the implementation of the MWLP this issue may be less well addressed.
Economy and employment	
82.7% of the population of Herefordshire are employed which is just above the national average. Unemployment remains below regional and national averages. Gross weekly earnings remain lower than the regional and national averages. Reliance on traditional employment sectors and service, whereas Herefordshire has aspirations to attract business in technology and knowledge intensive sectors.	Policy E1 in the adopted Core Strategy supports proposals which enhance employment provision and help diversify the economy of Herefordshire. In the absence of the MWLP, employment in the minerals and waste sectors within Herefordshire may further decrease.

Key sustainability issue	Likely evolution of the issue without implementation of the Herefordshire Minerals and Waste Local Plan
Retaining skilled members of the population is an issue for the local economy, and there is a need to improve training levels to enhance the quality of the local workforce.	
Transport and accessibility	
There is high reliance on private cars and traffic congestion in Hereford, putting additional strain on existing infrastructure. Severance and poor air quality resulting from queueing traffic has adverse impacts on journey times, and journey time reliability.	In the absence of the MWLP which will aim to reduce emissions from transport of waste and minerals, traffic growth and congestion in Herefordshire may continue in certain areas and along particular routes. However, other non-minerals and waste related road traffic is likely to contribute more to overall traffic growth and congestion in the county.

Chapter 4
Sustainability Appraisal Findings of the Mineral and Waste Site Allocations and Site Options

Introduction

4.1 This chapter presents the SA findings for the appraisal of the following minerals and waste site allocations in the Publication Draft MWLP which were assessed against the SA framework and assumptions presented in **Appendix F**:

- 14 proposed mineral site allocations;
- four potential Areas of Search;
- four reasonable alternative mineral site options that have not been allocated;
- eight proposed waste site allocations; and,
- nine Strategic Employment Areas.

4.2 Desk-based site assessments were undertaken for these sites which were appraised as 'policy-off', i.e. each site has been appraised firstly on its own merits without consideration to the potential mitigation and enhancement measures that might be available through policies in the Plan. The detailed SA matrices for the mineral site options that are proposed to be allocated are presented in **Appendix G**, the detailed matrices for the reasonable alternative mineral site options that have not been allocated are presented in **Appendix H**, and the detailed matrices for the proposed waste site allocations and Strategic Employment Areas are presented in **Appendix I**.

4.3 Where a size extension of an active site is proposed (sites M13, M16 and M20), the effects on the SA objectives are uncertain as they will depend on which part of the site will be extended. Effects are uncertain for the four Areas of Search as they will depend on the specific type and scale of the mineral development and where it comes forward within the Area of Search, which will not be known until the planning application stage. Active and operational mineral and waste sites are allocated in the Publication Draft MWLP and, for consistency, were subject to SA. Detailed assessments of these sites through examination of existing planning conditions was not undertaken and therefore the effects relating to these sites are also uncertain (with the exception of SA objectives 1, 2 and 4 which relate to maintaining employment levels and investment in the minerals and waste industries). Similarly, where a time extension of an active site is proposed (sites M12, M17 and M18), the effects are also

uncertain as these may have been addressed through conditions relating to the existing planning permission.

4.4 **Appendix D** presents an audit trail of the site options that have been assessed as reasonable alternatives and explains the Council's reasons for selecting or rejecting each one for inclusion in the Publication Draft MWLP. **Chapter 6** considers the effects of the Publication Draft MWLP as a whole summarising the sustainability effects for the MWLP Vision, strategic objectives, policies and site allocations as well as the potential cumulative, synergistic and secondary effects of implementing the plan. **Chapter 7** presents an overview of mitigation measures that will prevent, reduce and as fully as possible offset any significant adverse effects identified during the SA.

4.5 Since the Draft MWLP SA Report (2018), the boundaries and site refencing numbering for several sites has been revised. All changes are outlined in detail in **Appendix D**. **Table 4.1** provides a high-level summary of the changes to the sites proposed for inclusion in the Publication Draft MWLP. Note that the site refencing numbering is only used to record assessments in the SA, the Plan refers to the site names only.

Table 4.1: Changes to sites since Draft and Publication Draft MWLP

Site Name	Site Ref. Draft MWLP	Site Ref. Publication Draft MWLP
Land adjacent Upper Lyde Quarry (east)	M03b	M03c (sites b and d amalgamated into M03c)
Land north east of Upper Lyde Quarry	M03d	
Shobdon Quarry	M04	M04 (boundary extended eastwards)
Wellington Quarry	M05a, M05b, M05c, M05d, M05e, M05g	M05 (sites a-g, excluding f, have been amalgamated into one site) (site area reduced)
Land north west of Perton Quarry	M10b	M10b (minor amendments to boundary – more accurate mapping of the site area)
Callow Delve	M12	M12 (minor amendments to boundary – more accurate mapping of the site area)
Llandraw Delve	M16	M16 (revised boundary – more accurate mapping of site area and to include access road)
Pennsylvani Delves	M17	M17 (minor amendments to boundary – more accurate mapping of the site area)
Former Lugg Bridge Quarry	W13	W13 (revised boundary to include access road)
Moreton Business Park, Moreton-on-Lugg	W66	W66 (site area reduced)

SA Findings for the Mineral Site Allocations and Areas of Search

4.6 **Table 4.2** provides an overview of the SA effects (as presented in **Appendix G**) attributed to each of the 14 proposed mineral site allocations and four Areas of Search in the Publication Draft MWLP.

SA Objective 1 - Support, maintain or enhance the provision of employment opportunities in the minerals and waste sectors

4.7 All 14 mineral site allocations and the four Areas of Search could have a direct and indirect effect on increasing employment levels during site preparation, operation and restoration, as they are likely to result in a small amount of job creation for local people. Therefore, minor positive effects rather than significant positive effects are expected for all sites with regard to SA objective **1: Employment.** These beneficial

effects are most likely to be experienced in the short and medium term, rather than in the long-term. These effects are uncertain for the proposed site extensions at M13, M16 and M20 as they will depend on the size of the site extensions, which is unknown at this stage in the assessment. Effects are also uncertain for the Areas of Search as they would be dependent on the type and scale of the mineral development within the areas, which would not be known until the planning application stage.

SA Objective 2 - Maintain or enhance conditions that enable a sustainable economy and continued investment

4.8 Minor positive effects are expected for all the mineral site allocations and Areas of Search with regard to SA objective **2: Sustainable Economy**, as the allocation of mineral sites for extraction will ensure a steady and adequate supply of minerals to meet the needs of society and will encourage long-term investment in Herefordshire's minerals sector.

SA Objective 3 - Protect and improve the health of the people of Herefordshire, and reduce disparities in health geographically and demographically

4.9 Mineral sites could have adverse effects on the amenity of local residents and communities as sites would result in some level of noise, vibration and light pollution during site preparation, operation and restoration, and through the transportation of minerals around and from the site. The extent of noise, vibration and light pollution will depend on the type of mineral extracted from the site, the scale of the operation and the type of activities undertaken within the site. The extent of the effect experienced will depend on the proximity of sensitive receptors, including schools, hospitals, faith centres and churches. In addition, where minerals sites contain or intersect areas of open space, public rights of way (PROW) or cycle paths, potential opportunities for recreation/access to the countryside (which have benefits for health) could be lost.

4.10 Of the 14 minerals site allocations, four sites are expected to have uncertain significant negative effects in relation to SA objective **3: Health** as they are within 100m of one or more of the sensitive receptors identified above. Most often, these receptors are nearby residential areas in settlements. Significant negative effects are also identified for the four Areas of Search as they contain numerous sensitive receptors; however these effects are uncertain and would be dependent on the exact location, scale and type of development within the areas, which would not be known until the planning application stage.

4.11 Uncertain minor negative effects are identified for minerals sites M10a and M20 as they intersect with an area of open space, PROW or cycle path which would either mean removing part of a recreational asset, or removing or temporarily closing land which has potential for recreation/access to the countryside.

4.12 Negligible effects are expected for the remaining eight sites as they are not within 100m of a sensitive receptor and do not intersect with an area of open space or public path, and therefore are not considered likely to have adverse effects on health and amenity by means of their operation.

SA Objective 4 - Reduce poverty and social inclusion by closing the gap between the most deprived areas in the county and the rest of the county

4.13 Uncertain minor positive effects are expected for all the mineral site allocations and Areas of Search with regard to SA objective **4: Poverty & Equality**, as the allocation of mineral sites for extraction is expected to result in a small number of jobs during site preparation, operation and restoration which may help to reduce employment deprivation.

SA Objective 5 - Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county

4.14 Due to the limited opportunities for rail transport of materials in Herefordshire, there will be a reliance on road transport to transfer minerals from sites to market. Therefore, it is assumed that all mineral sites have the potential to generate traffic and greenhouse gas emissions in Herefordshire. However, without detailed information about how the sites will be worked (which would be available at the planning application stage), the extent of the negative impact has been assessed using the size of the site as an indication as it was assumed that larger sites are likely to generate more movements of heavy goods vehicles. The further vehicles transporting minerals have to travel along local roads (i.e. not on the primary road network) the higher the potential for traffic and localised pollution, as vehicles are likely to travel more slowly on local roads thereby increasing the potential for traffic, and slower moving traffic may result in more pollutant deposition along those routes than vehicles moving at a consistent speed. Moreover, the proximity of sites to public transport links will affect the extent to which employees are able to make use of non-car based modes of transport to commute to and from mineral sites.

4.15 Based on the above assumptions, of the 14 minerals site allocations assessed, six sites are expected to have significant negative effects in respect to this SA objective (M07a, M07b, M12, M13, M17, and M18) while eight sites are expected to have significant negative effects as part of overall mixed effects as these sites are either large (over 20ha) and are expected to generate high volumes of heavy goods

vehicle traffic ; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes; or, are not within 800m of any sustainable transport links which will encourage private car use among employees and emissions generation. Uncertainty is attached to the effects identified for sites M05, M07a, M10a, M12, M13, M16, M17, M18 and M20. Sites M05, M07a, M10a, M12, M17 and M18 are either active operational sites or are being proposed as time extensions in order to complete mineral extraction operations within the plan period. There is uncertainty attached to these effects as it is likely that the negative effects relating to traffic have been addressed through conditions relating to the existing planning permission for the site. Sites M13, M16 and M20 are proposed size extensions and therefore effects will be dependent on which part of the sites will be extended, which is not known at this stage.

4.16 Eight mineral site allocations (M03a, M03c, M04, M05, M10a, M10b, M16 and M20) are expected to have mixed effects comprising minor positive effects and significant negative effects. An explanation of potential negative effects has been described in the preceding paragraph. The minor positive effects identified for seven sites recognises the proximity to one or two sustainable transport links which will encourage employees of the mineral sites to use sustainable transport thereby reducing transport-related emissions. Uncertain minor positive effects are identified for site M05 as the site is within 1km of the Moreton-on-Lugg railhead which may be used to transport minerals using a more sustainable mode of transport than road-based travel.

4.17 It is recognised that within all four Areas of Search, there are areas which could be within 800m of numerous sustainable transport links thereby enabling sustainable travel by employees of minerals sites, leading to minor positive effects, however, there are also areas which could be more than 250m from a main road or more than 800m from a sustainable transport link, resulting in significant negative effects. As the exact location of potential future sites within the Areas of Search is unknown, all effects are uncertain.

SA Objective 6 - Value, protect and enhance the county's historic environment and cultural heritage

4.18 Uncertain minor negative effects are identified for all mineral sites in relation to SA objective **6: Historic Environment** as adverse effects on buried archaeology in limestone, sandstone or sand and gravel deposits may be possible but are unlikely.

4.19 Two sites (M05 and M07a) are adjacent to designated heritage features that may be adversely affected by the continuation of nearby mineral extraction. However, effects are uncertain minor as these sites are active (or partially active) and effects on heritage assets are likely to have already been addressed through conditions relating to the existing planning permission.

4.20 Effects are expected to be significant for the four Areas of Search as these areas contain designated heritage assets that could be adversely affected by mineral extraction if development were to take place at sites either containing or adjacent to these assets or at sites that contribute to the setting of heritage assets. Therefore, effects are uncertain for the Areas of Search as it would be dependent on the exact location of minerals development within the Areas of Search, which would not be known until the planning application stage.

SA Objective 7 - Value, protect and enhance the character and built quality of settlements and neighbourhoods

4.21 Significant negative effects are expected with regard to SA objective **7: Built Environment** for two mineral site allocations (M05 and M07a) as they are within close proximity (100m) of a settlement, and, as such, may have an adverse effect on the character of the area. However, these effects are uncertain as any adverse effect from the continued operation of the sites is likely to have been addressed through conditions relating to the existing planning permission.

4.22 Uncertain significant negative effects have been identified in relation to all Areas of Search (A, B, C, and D), as each of these contains multiple settlements. It is uncertain where mineral extraction proposals will come forward, however, should they be within 100m of settlements, there is the potential for adverse effects on the character of the area.

4.23 Negligible effects have been identified in relation to the remaining sites, as they are not within close proximity of a settlement.

SA Objective 8 - Move treatment of waste up the waste hierarchy

4.24 Minor negative effects have been identified in relation to SA objective **8: Waste** for the mineral site allocations at Upper Lyde Quarry (M03a and M03c), Shobdon Quarry (M04) and Wellington Quarry (M05) as these sites are identified in the Publication Draft MWLP as appropriate locations for the disposal of inert waste following extraction, which is judged to have negative effects in terms of moving the treatment of waste up the waste hierarchy. Minor negative effects are expected for the remaining mineral site allocations and four Areas of Search as they may dispose of inert or landfill waste, depending on the type of restoration proposed.

SA Objective 9 - Promote sustainable use of mineral resources

4.25 Mineral sites are not classed as inappropriate development with respect to sterilisation of mineral resources – the inappropriate development relates to other development types such as housing or employment, which could 'sterilise' the mineral resource form being extracted if developed on top of it or nearby. Minor positive effects are expected for all 14 mineral site allocations and four Areas of Search assessed with regard to SA objective 9**: Mineral Resources** as the allocation of sites would provide a degree of protection to mineral resources from inappropriate non-mineral development, and would contribute to the supply of aggregates to meet the needs of society.

SA Objective 10 - Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem

4.26 Due to the limited opportunities for rail transport of materials in Herefordshire, there will be a reliance on road transport to transfer minerals from sites to market. Therefore, it is assumed that all mineral sites have the potential to generate traffic and greenhouse gas emissions in Herefordshire, however, without detailed information about how the sites will be worked (which would be available at the planning application stage), the extent of the negative impact has been assessed using the size of the site as an indication as it was assumed that larger sites are likely to generate more movements of heavy goods vehicles resulting in the production of high levels of carbon dioxide and other greenhouse gas emissions. The further vehicles transporting minerals have to travel along local roads (i.e. not on the primary road network) the higher the potential for traffic and localised pollution as vehicles are likely to travel more slowly on local roads thereby increasing the potential for traffic, and slower moving traffic may result in more pollutant deposition along those routes than vehicles moving at a consistent speed. Moreover, the proximity of sites to public transport links will affect the extent to which employees are able to make use of non-car based modes of transport to commute to and from mineral sites.

4.27 Based on the above assumptions, of the 14 minerals site allocations assessed, six sites are expected to have significant negative effects in respect to this SA objective (M07a, M07b, M12, M13, M17, and M18) while eight sites are expected to have significant negative effects as part of overall mixed effects as these sites are either large (over 20ha) and are expected to generate high volumes of heavy goods vehicle traffic resulting in the production of high levels of carbon dioxide and other greenhouse gas emissions; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes; or, are not within 800m of any sustainable transport links which will encourage private car use among employees and emissions generation. Uncertainty is attached to the effects identified for sites M05, M07a, M10a, M12, M13, M16, M17, M18 and M20. Sites M05, M07a, M10a, M12, M17 and M18 are either active operational sites or are being proposed as time extensions in order to complete mineral extraction operations within the plan period. There is uncertainty attached to these effects as it is likely that the negative effects relating to traffic have been addressed through conditions relating to the existing planning permission for the site. Sites M13, M16 and M20 are proposed size extensions and therefore effects will be dependent on which part of the sites will be extended, which is not known at this stage.

4.28 Eight potential mineral site allocations (M03a, M03c, M04, M05, M10a, M10b, M16 and M20) are expected to have mixed effects comprising minor positive effects and significant negative effects. An explanation of potential negative effects has been described in the preceding paragraph. The minor positive effects identified for seven sites recognises the proximity to one or two sustainable transport links which will encourage employees of the mineral sites to use sustainable transport thereby reducing transport-related emissions. Uncertain minor positive effects are identified for site M05 as the site is within 1km of the Moreton-on-Lugg railhead which may be used to transport minerals using a more sustainable mode of transport than road-based travel.

4.29 It is recognised that within all four Areas of Search, there are areas which could be within 800m of numerous sustainable transport links thereby enabling sustainable travel by employees of minerals sites, leading to minor positive effects, however, there are also areas which could be more than 250m from a main road or more than 800m from a sustainable transport link, resulting in significant negative effects. As the exact location of potential future sites within the Areas of Search is unknown, all effects are uncertain.

SA Objective 11 - Promote effective restoration and appropriate after use of sites

4.30 Significant positive effects are expected for the majority of the 14 mineral site allocations with regard to SA objective **11: Restoration**, as the NPPF (2019) states that mineral sites should be reclaimed at the earliest opportunity, taking account of aviation safety, and that high-quality restoration and aftercare of minerals sites takes place. These effects are uncertain dependent on the type of restoration proposed and eventually developed on sites, which will not be known until the planning application stage.

4.31 The restoration of mineral sites also offers the potential to deliver biodiversity gains in the long term, however, many sites are restored to wetland and grassland habitats which can attract large numbers of species that may in certain circumstances pose a hazard to aircraft. Therefore, a minor negative effect is identified for M04 as this site is located within the Shobdon Aerodrome Safeguarding Zone, and has potential for adverse impacts on aircraft safety from bird-strike. These effects are uncertain dependent on the type of restoration proposed and eventually developed on a site, which will not be known until the planning application stage. Area of Search B and Area of Search D are partially located within the Shobdon Aerodrome Safeguarding Zone and the Gloucestershire Aerodrome Safeguarding Zone respectively. As such, dependent on where development takes place, minor negative effects could also be likely. Therefore, mixed effects (uncertain significant positive and uncertain minor negative) are identified for these Areas of Search.

SA Objective 12 - Value, maintain, restore and expand county biodiversity and geodiversity

4.32 The potential impact on biodiversity and geodiversity present on each site, or adjacent to the potential mineral sites, cannot be determined with certainty at this strategic level of assessment. This would be determined once more specific proposals are developed and submitted as part of a planning application. Therefore, as an indication of the likelihood of significant negative effects, proximity of designated biodiversity and geodiversity conservation sites to potential mineral sites has been used. Uncertainty is attached to all effects as it will depend on the design, operation and restoration of extraction sites.

4.33 Potential allocation sites M05 and M20 have both been identified as having uncertain significant negative effects with regard to SA objective **12: Biodiversity & Geodiversity** as they are located within 250m of either the River Wye SAC or River Lugg SSSI. The HRA Report (LUC, 2020) also identifies for sites M05, M12 and Area of Search C potential for significant effects on the River Wye SAC and potential for significant effects on the Wye Valley and Forest Dean Bat Sites SAC (for site M12 only) as a result of physical loss or damage/non-physical disturbance//non-toxic contamination (LSEs in relation to water quality are outlined in SA objective 14: Water).

4.34 The SA assessment also identifies uncertain significant negative effects for site M13 as it is within 250m of the Black Mountains SSSI. Mixed effects (uncertain minor positive/uncertain significant negative) are identified for sites M10a and M10b as they either contain (as is the case for M10a) or are adjacent (as is the case for M10b) to the Perton Roadside Section Quarry SSSI. The negative effects are identified as these sites have the potential to affect biodiversity and geodiversity through habitat/geology damage/loss, fragmentation, and disturbance to species from noise, light, vibration and human presence. The uncertain minor positive effects are expected as extraction at M10a and M10b may expose more geological features at the SSSI making them visible and available for learning opportunities.

4.35 Due to the extent of the Areas of Search, they all contain internationally, nationally or locally designated conservation sites and are therefore expected to have uncertain significant negative effects on this SA objective.

4.36 Uncertain minor negative effects have been identified for the remaining nine mineral site allocations as the extraction of minerals would create voids and permanently alter the geodiversity of the sites and/or the sites contain a locally designated site (M07a), an area of ancient woodland (M07a and M12) or an area listed on the Priority Habitat Inventory (M04 and M12).

SA Objective 13 - Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces

4.37 The potential impact on landscape quality of Herefordshire cannot be determined with certainty at this strategic level of assessment. This would be determined once more specific proposals are developed and submitted as part of a planning application. Therefore, as an indication of the likelihood of significant negative effects, proximity of landscape designations and areas classed as being of 'high sensitivity' in The Urban Fringe Sensitivity Analysis to potential mineral sites have been used. Uncertainty is attached to all effects as it will depend on the design, operation and restoration of extraction sites.

4.38 Area of Search C contains areas identified as being of high sensitivity according to The Urban Fringe Sensitivity Analysis, as well as areas of open space. An area of high sensitivity indicates an increased vulnerability of key landscape characteristics to change and has therefore been identified as having an uncertain significant negative effect in relation to SA objective **13: Landscape**. Area of Search D has also been identified as having an uncertain significant negative effect as it contains part of the Wye Valley AONB, as well as areas of open space. Uncertain minor negative effects have been identified for Areas of Search A and B. Both of these broader Areas of Search contain areas of open space or Registered Parks/Gardens, the loss of which would adversely impact on local landscape character.

4.39 All of the 14 mineral site allocations assessed, other than the four Areas of Search, have been identified as having negligible effects in relation to landscape quality. This is because none of the sites contain areas of open space, parks or gardens; are in close proximity (<250m) to an AONB;

are within an area classified as highly sensitive in The Urban Fringe Sensitivity Analysis; or are within a Green Infrastructure Corridor or a Green Infrastructure Enhancement Zone.

SA Objective 14 - Value, protect and enhance the quality of watercourses and maximise the efficient use of water

4.40 Effects are uncertain for this SA objective as the extent to which minerals sites will affect ground and surface water depends on the type of mineral worked, site design and characteristics, and geological conditions. Mineral extraction can also pose a risk to the water environment by decreasing (for example as a result of extraction) or increasing water quantity (for example due to impeded water flow or restoration) ground or surface water levels. Minerals sites also pose a risk to current vulnerable waterbodies where there is a hydrological link, as well as to SSSI or SAC waterbodies, as they could result in effects on water quality.

4.41 Site M05 is expected to have an uncertain significant negative effect with regard to SA objective **14: Water** as it is within 250m of the River Lugg which is designated as a SSSI waterbody that has a moderate ecological status but is failing in terms of its chemical status. Further uncertain significant negative effects are identified for site M20 as it is within 250m of the River Wye SSSI waterbody which also has a moderate ecological status but is failing in terms of its chemical status.

4.42 The HRA Report (LUC, 2020) identifies that site M05, located at Wellington Quarry, adjacent to the River Wye SAC, shares direct hydrological connectivity with the River Wye SAC, either through sharing boundaries or via field drains. However, as this allocation relates to the extraction of sand and gravel which is non-reactive both chemically and biologically, the potential for activities at this site to result in changes in water quality, including phosphate released through the movement of soils, which would be considered significant is low and is likely to be confined to the start and end of mineral working. Nevertheless, in the absence of appropriate safeguards and mitigation measures, the potential for operations at these sites to harm the qualifying features of the SAC, for example through plant washing, chemical spills and pollution events, and surface water run-off, cannot be excluded. There is potential for dredging, dewatering and excavation below the water table in relation to the sand and gravel extraction proposed through site allocation M05. However, the HRA concluded that no LSEs on the River Wye SAC as a result of changes in water quantity are expected.

4.43 **T**he HRA Report also identifies that site M20 is located 300m upslope from the River Wye SAC and the western edge of the site is situated immediately adjacent to a brook at Merbach which flows directly into the River Wye SAC while the western edge of site M12 is situated immediately adjacent to Mally Brook which discharges into the River Wye SAC approximately 3.7km downstream. As a result, run-off of chemicals, pollutants, sediment or contaminated water has the potential to result in LSEs on the SAC. However, it is likely that this could be avoided with relative ease through a commitment to, and implementation of, appropriate mitigation safeguards including best practice working methods.

4.44 An uncertain minor negative effect is identified for site M12 as a portion of the site is within a Source Protection Zone (SPZ3).

4.45 Uncertain significant negative effects are identified for five mineral site allocations (M04, M05, M13, M16 and M20) as these sites are either within 250m of rivers which have ‘bad’ or ‘fail’ ecological or chemical status, are within 250m of a SSSI waterbody. Negligible effects are identified for eight sites as they are not within a Source Protection Zone; within 250m of a vulnerable waterbody; or within 1km of a SSSI or SAC waterbody, and therefore are not likely to affect water quality.

4.46 Uncertain significant negative effects are expected for Areas of Search A, B, C and D as they are either contain or are within 250m of rivers which have ‘bad’ or ‘fail’ ecological or chemical status, are within 250m of a SSSI waterbody, or intersect SPZ1. The effects for developing in the Areas of Search are also uncertain as the exact location of sites is unknown at present. Area of Search A includes the Ridgemoor Brook in the south-east, and an unnamed tributary in the north-west. Area of Search B includes the Pinsley Brook, Curl Brook and River Arrow, and Area of Search D includes Pentalow Brook. All of these watercourses have either 'moderate' or 'poor' ecological status, and all have a failing chemical status.

4.47 Within Area of Search C there is a Source Protection Zone (SPZ1) which provides protection for the head works around abstraction boreholes. Moreton Brook, also within the Area of Search, has a ‘bad’ ecological status, and is failing in terms of chemical status, which could be potentially affected further should it have connectivity with a future minerals site. Additionally, Wellington Brook and the River Lugg is within the Area of Search and have a poor and moderate ecological status, respectively and are both failing in terms of their chemical status. The River Lugg SSSI is within the Area of Search. There is, therefore, potential for future sites to fall within or close to these areas, leading to a significant negative effect.

SA Objective 15 - Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment

4.48 The 2018 SA of the Draft MWLP used the Environment Agency Flood Zones dataset to indicate likely

effects in relation to flooding. However, the Level 1 SFRA was finalised in 2019 while the detailed Level 2 SFRA of the Herefordshire MWLP was finalised in January 2020 and therefore the assessment of effects against SA objective **15: Flooding** have been revised in this SA of the Publication Draft MWLP to refer to the SFRAs. The Level 2 SFRA[26] builds on the Herefordshire Level 1 SFRA[27] providing a more detailed assessment of flood risk at a number of sites identified by the Council in the Draft MWLP that may be at risk of flooding. It considers their vulnerability in accordance with the requirements of the Sequential and Exception Tests.

4.49 National Planning Practice Guidance identifies minerals working and processing (except for sand and gravel working) as 'less vulnerable' and therefore considered suitable in Flood Zones 1, 2 and 3a but unsuitable in Flood Zone 3b (the functional flood plain). Sand and gravel working is considered a 'water compatible' use and is therefore suitable in all flood zones. NPPG also states that mineral workings should not increase flood risk elsewhere and need to be designed, worked and restored accordingly.

4.50 The SFRA states that the 11 mineral site allocations assessed in the SFRA pass the Sequential Test and are appropriate for proposed development as set out in the MWLP, noting that a sequential approach may still need to be applied within sites to steer development to areas at lowest flood risk (sites M12, M17, M18 and the Areas of Search were not assessed). Where flood risk areas have been identified and the Exception Test is required, it is likely that this can be best managed through the appropriate location of more vulnerable development in areas at lower flood risk and, where required, there are feasible mitigation measures that can be implemented to manage these risks without increasing flood risk elsewhere. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and shallow infiltration and attenuated discharge to nearby watercourses. Nevertheless, in the absence of appropriate safeguards and mitigation measures outlined in the SFRA, the potential for the development of these sites to have a negative effect on this SA objective, cannot be excluded.

4.51 Site M05 is expected to have an uncertain significant negative effect as there are significant areas of the site located in Flood Zones 3a and 3b attributable to the River Lugg and unnamed watercourse to the south. Wellington Brook flows through the site and the Moreton Brook runs parallel to the southern site boundary. The SFRA states that a Sequential Test is required for development in Flood Zones 2 and 3 and only water compatible development is considered acceptable in Flood Zone 3b. An Exception Test is required for more vulnerable development in Flood Zone 3a.The SFRA recommends mitigation measures including a site-specific FRA; detailed hydraulic modelling of the River Lugg and the ordinary watercourse; and, attenuated discharge to Wellington Brook and the ordinary watercourse.

4.52 Nine mineral site allocations (M03a, M03c, M04, M07a, M07b, M10a, M10b, M13, M16, M20) are identified as having uncertain minor negative effects as they are within Flood Zone 1 but are at risk from other sources of flooding (e.g. surface water flooding due to site topography). The SFRA notes that these sites are not considered to be at notable flood risk but that it is still important that future applications for these sites are in line with the Level 1 SFRA and that a detailed drainage strategy and (if required) site-specific flood risk assessment are submitted to support the planning application. These sites all pass the Sequential Test and Exception Test.

4.53 Sites M12, M17 and M18 and the four Areas of Search were not considered in the SFRA and therefore the Environment Agency Flood Risk dataset was used to indicate likely flood extents. Sites M12, M17 and M18 are within Flood Zone 1 and are proposed for building stone extraction. Negligible effects are expected for these sites as according to the NPPG, minerals working and processing (except for sand and gravel working) are classed as 'less vulnerable' and are therefore considered suitable in Flood Zones 1, 2 and 3a but unsuitable in Flood Zone 3b (the functional flood plain).

4.54 There are Flood Zone 3 areas within Areas of Search A, B and C. The acceptability of any minerals extraction from these areas would need to be assessed against the minerals and other relevant policies of the MWLP. Whilst at this stage significant negative effects are identified for Area of Search A, B and C based on the constraints identified, effects are uncertain as the location of future minerals sites in these areas is not known. A negligible effect is identified for Area of Search D because it does not contain any areas of Flood Zones 2 or 3.

SA Objective 16 - Minimise noise, light, and air pollution

4.55 There are two AQMAs in Herefordshire – the Hereford AQMA and the Bargates Leominster AQMA. All new development in AQMAs (regardless of the use specified) has the potential to aggravate local air quality in terms of a resultant increased number of journeys during the construction, extraction and operational phases thereby compounding existing air quality problems. Sensitive receptors include residential areas, schools, hospitals and faith centres

[26] Herefordshire Council (2020) Herefordshire Mineral and Waste Local Plan Level 2

[27] Herefordshire Council (2019) Herefordshire Mineral and Waste Local Plan Level 1 [online] https://www.herefordshire.gov.uk/directory-record/2111/strategic-flood-risk-assessment

(e.g. churches, mosques, temples). Mineral sites would result in some level of noise, vibration and light pollution during site preparation, operation and restoration and associated with the transport of minerals around and from the site.

4.56 Site M05 is expected to result in a significant negative effect in relation to SA objective **16: Pollution** as, whilst it is not within an AQMA, it is within 100m of the settlements of Moreton-on-Lugg and Wellington which could lead to adverse effects on residential receptors. However, effects are uncertain as the extent of noise, vibration and light pollution will depend on the scale of the operation and the type of activities undertaken within the site. Moreover, the uncertain effect is also due to the fact that effects are considered likely to have been addressed through conditions on the existing planning permission within the site. Negligible effects are expected for the remaining 13 mineral site allocations.

4.57 All four Areas of Search are considered to have potential to result in significant negative effects given that there are sensitive receptors including schools, settlements and churches within them. There is, therefore, potential for future sites to fall within or close to these areas, leading to a significant negative effect, however, given that the acceptability of any minerals extraction from these areas would need to be assessed against the minerals and other relevant policies of the MWLP, and also that the location of sites within the Areas of Search are unknown at present, the effects are uncertain.

SA Objective 17 - Value, protect and enhance soil quality and resources

4.58 The majority of Herefordshire consists of Grade 2 and Grade 3 agricultural land. There are scattered areas of Grade 1 land and some areas of lower quality, Grades 4 and 5, particularly in the west of the country. Therefore, most site options are expected to have uncertain minor or significant negative effects in relation to SA objective **17: Soil**. Four site allocations (M03a, M03c, M04 and M05) are expected to have uncertain significant negative effects due to development on mainly (>50%) high quality best most versatile agricultural land (Grade 1, 2 and 3a) or where sites require large areas of greenfield (>20ha) will result in that land being lost to other uses. Where sites are located on Grade 3 or 3b agricultural land, comprise (<50%) best most versatile agricultural land or are smaller (<20ha), uncertain minor negative effects have been identified (sites M07a, M07b, M12, and M20). Effects are uncertain as Section 5 of The Town and Country Planning Act 1990 (as amended) requires mineral planning authorities to ensure that restoration meets the required standard (normally to the same physical characteristics as before). Sites M10a, M10b, M13, M16, M17 and M18 have been identified as having negligible effects as these sites are not on Grade 1, 2 or 3 agricultural land.

4.59 Uncertain significant negative effects are identified for Areas of Search A, B and C as these areas comprise Grade 2 and Grade 3 Best and Most Versatile Agricultural Land while an uncertain minor negative effect is expected for Area of Search D as it comprises Grade 3, Grade 4 and Non-Agricultural Land. Effects are uncertain as the broad Areas of Search provide opportunities for mineral working at sites that will not have adverse effects on Best and Most Versatile Agricultural Land.

Changes in effects since Draft MWLP

4.60 The size of site M05 has been reduced from the Draft MWLP. Consequently, the likely sustainability effects have changed in the Publication Draft, in relation to SA objectives **5: Sustainable Transport**, **7: Built Environment**, **10: Climate Change**, **12: Biodiversity and Geodiversity**, **14: Water**, **16: Pollution** and **17: Soil**. This is largely due to the amalgamation of the sites to form M05, where the worst-case scenario for sites M05a-M05g has been brought forward.

4.61 Due to the changes in the status of many of the rivers in Herefordshire from the WFD River Waterbody Catchments 2016 Cycle 2 to the 2019 Cycle 2, the sustainability effects in relation to SA objective **14: Water** have been revised. Areas of Search A, B and D were previously identified as experiencing uncertain minor positive effects in relation to SA objective 14, however, as they each contain watercourses which are failing in terms of chemical status, these areas are now expected to have an uncertain significant negative effects on the water environment. The effects for site allocations M04, M13 and M16 have been revised from uncertain minor negative effects to uncertain significant negative effects as they are each within 250m of a watercourse with 'bad' or 'failing' ecological or chemical status. Additionally, the sustainability effect for site M12 has been revised from a negligible to an uncertain minor negative effect as a portion of the site is within Source Protection Zone 3.

4.62 The 2018 SA of the Draft MWLP used the Environment Agency Flood Zones dataset to indicate likely effects in relation to flooding. However, the Level 1 SFRA was finalised in 2019 while the detailed Level 2 SFRA of the Herefordshire MWLP was finalised in January 2020 and therefore the assessment of effects against SA objective **15: Flooding** has been revised in this SA of the Publication Draft MWLP to refer to the Level 1 and Level 2 SFRAs. In the Draft MWLP SA Report all potential mineral sites were identified as having negligible effects in relation to SA objective 15: Flooding. However, based on the detailed information for each site in the Level 2 SFRA, the effects have been revised to an uncertain significant negative effect for M05 and uncertain minor negative effects for nine mineral sites (M03a, M03c, M04, M07a, M07b, M10a, M10b, M13, M16, M20). The effects

for sites M12, M13, M17, M18 and the four Areas of Search are unchanged since the Draft MWLP SA.

4.63 The boundary of site M03c in the Publication Draft MWLP now includes sites M03b and M03d but excludes site M03c as identified in the Draft MWLP. As such, the sustainability effects for M03c (Publication Draft MWLP) are the same as those identified for sites M03b and M03d in the previous SA.

Table 4.2: Summary of SA effects for the mineral site allocations

SA Objective	1: Employment	2: Sustainable Economy	3: Health	4: Poverty and Equality	5: Sustainable Transport	6: Historic Environment	7: Built Environment	8: Waste Hierarchy	9: Minerals Resources	10: Climate Change	11: Restoration	12: Biodiversity & Geodiversity	13: Landscape	14: Water	15: Flooding	16: Pollution	17: Soil
M03a	+	+	0	+?	+/	?	0		+	+/	++		0	0	?	0	?
M03c	+	+	0	+?	+/	?	0	?	+	+/	++?	?	0	0	?	0	?
M04	+	+	0	+?	+/	?	0		+	+/	++?/ ?	?	0	?	?	0	?
M05	+	+	?	+?	+/ ?	?	?		+	+/ ?	++?	?	0	?	?	?	?
M07a	+	+	?	+?	?	?	?	?	+	?	++?	?	0	0	?	0	?
M07b	+	+	?	+?		?	0	?	+		++?	?	0	0	?	0	?
M10a	+	+	?	+?	+/ ?	?	0	?	+	+/ ?	++?	+?/ ?	0	0	?	0	0
M10b	+	+	?	+?	+/	?	0	?	+	+/	++?	+?/ ?	0	0	?	0	0
M12	+	+	0	+?	?	?	0	?	+	?	++?	?	0	?	0	0	?
M13	+?	+	0	+?	?	?	0	?	+	?	++?	?	0	?	0	0	0
M16	+?	+	0	+?	+/ ?	?	0	?	+	+/ ?	++?	?	0	?	?	0	0
M17	+	+	0	+?	?	?	0	?	+	?	++?	?	0	0	0	0	0
M18	+	+	0	+?	?	?	0		+	?	++?	?	0	0	0	0	0
M20	+?	+	?	+?	+/ ?	?	0	?	+	+/ ?	++?	?	0	?	?	0	?
Area of Search Area A	+?	+	?	+?	+?/ ?	?	?	?	+	+?/ ?	++?	?	?	?	?	?	?
Area of Search Area B	+?	+	?	+?	+?/ ?	?	?	?	+	+?/ ?	++?/ ?	?	?	?	?	?	?
Area of Search Area C	+?	+	?	+?	+?/ ?	?	?	?	+	+?/ ?	++?	?	?	?	?	?	?
Area of Search Area D	+?	+	?	+?	+?/ ?	?	?	?	+	+?/ ?	++?/ ?	?	?	?	0	?	?

SA Findings for the Reasonable Alternative Site Options

4.64 The SA matrices for four mineral site options considered but not included in the Publication Draft MWLP are presented in **Appendix H**. The Council's reasons for rejecting these sites for inclusion in the Publication Draft MWLP are summarised as follows:

- Site M03c at Upper Lyde Quarry - potential visual impacts.
- Site M05f at Wellington Quarry - not a logical extension to the existing workings, situated on the opposite side of the A49 and beginning to wrap around Wellington Village.

- Site M22 Land at South Hide Farm and South End Farm, Mathon – site is within the Malvern Hills AONB.
- Site M23 Land at Arrow Green – potential impact on the Arrow Mill, Grade II* Listed Building.

4.65 **Table 4.3** provides an overview of the SA effects (as presented in **Appendix H** attributed to each reasonable alternative site option).

SA Objective 1 - Support, maintain or enhance the provision of employment opportunities in the minerals and waste sectors

4.66 All four mineral site options could have a direct and indirect effect on increasing employment levels during site preparation, operation and restoration, as they are likely to result in job creation for local people. Therefore, minor positive effects rather than significant positive effects are expected for the reasonable alternative sites with regard to SA objective **1: Employment** as these beneficial effects are most likely to be experienced in the short and medium term, rather than in the long-term.

SA Objective 2 - Maintain or enhance conditions that enable a sustainable economy and continued investment

4.67 Minor positive effects are expected for all four reasonable alternative sites with regard to SA objective **2: Sustainable Economy**, as the allocation of mineral sites for extraction will ensure a steady and adequate supply of minerals to meet the needs of society and will encourage long-term investment in Herefordshire's minerals sector.

SA Objective 3 - Protect and improve the health of the people of Herefordshire, and reduce disparities in health geographically and demographically

4.68 As previously outlined in the chapter, mineral sites could have adverse effects on the amenity of local residents and nearby communities. Site option M05f is expected to have an uncertain significant negative effect in relation to SA objective **3: Health** as it is within close proximity to Wellington which may result in the continuation of adverse effects on the health and amenity of residents in Wellington. An uncertain minor negative effect is expected for site option M22 as the site intersects with several Public Rights of Way paths which could be lost to development. Effects are uncertain as the extent of noise, vibration and light pollution will depend on the type of mineral extracted from the sites, the scale of the operations and the type of activities undertaken within the sites.

4.69 Negligible effects are expected for site options M03c and M23 as they are not within 100m of a sensitive receptor and do not intersect with an area of open space or public path, and therefore are not considered likely to have adverse effects on health and amenity by means of their operation.

SA Objective 4 - Reduce poverty and social inclusion by closing the gap between the most deprived areas in the county and the rest of the county

4.70 Uncertain minor positive effects are expected for all reasonable alternative site options with regard to SA objective **4: Poverty & Equality**, as the allocation of mineral sites for extraction is expected to result in a small number of jobs during site preparation, operation and restoration which may help to reduce employment deprivation.

SA Objective 5 - Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county

4.71 Site options M22 and M23 are expected to have significant negative effects in respect to SA objective **5: Sustainable Transport** as they are large sites (>20ha) and are expected to generate high volumes of heavy goods vehicle traffic. The significant negative effect for M23 is combined with a minor positive effect as it is within 800m of two bus stops which would enable employees to easily access the site via sustainable transport. Mixed effects (minor negative/minor positive) are identified for site options M03c and M05f as the sites are within close proximity to sustainable transport links which could be used by employees of the sites, however there would also be adverse effects on the road network from the increase in HGVs transporting minerals.

SA Objective 6 - Value, protect and enhance the county's historic environment and cultural heritage

4.72 Uncertain significant negative effects are identified for site options M22 and M23 as they either contain or are directly adjacent to several Grade II Listed Buildings which may be adversely affected by mineral extraction within the sites. Site options M03c and M05f are expected to have uncertain minor negative effects as there may be potential for adverse effects on buried archaeology from mineral extraction. Effects are uncertain and are dependent on the design, scale and layout of the developments which are unknown at this stage.

SA Objective 7 - Value, protect and enhance the character and built quality of settlements and neighbourhoods

4.73 An uncertain significant negative effect is identified with regard to SA objective **7: Built Environment** for reasonable alternative site M05f as it is within close proximity (100m) of Wellington, and, as such, may have an adverse effect on the character of the area. However, this effect is

uncertain depending on the exact nature and the proposed design of the mineral site, which would not be known until the planning application stage.

4.74 Negligible effects have been identified for site options M03c, M22 and M23 as they are not within close proximity of a settlement.

SA Objective 8 - Move treatment of waste up the waste hierarchy

4.75 Minor negative effects have been identified for the mineral site options at Upper Lyde Quarry (M03c) and Wellington Quarry (M05f) as these sites are identified in the Publication Draft MWLP as appropriate locations for the disposal of inert waste following extraction, which is judged to have negative effects in terms of moving the treatment of waste up the waste hierarchy. Site options M22 and M23 are expected to have uncertain minor negative effects as they may dispose of inert or landfill waste following extraction, however this is dependent on the type of restoration proposed, which is unknown at this stage.

SA Objective 9 - Promote sustainable use of mineral resources

4.76 Minor positive effects are identified for all site options with regard to SA objective **9: Mineral Resources** as the allocation of sites would provide a degree of protection to mineral resources from inappropriate non-mineral development, and would contribute to the supply of aggregates to meet the needs of society.

SA Objective 10 - Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem

4.77 Site options M22 and M23 are expected to have significant negative effects in respect to SA objective **10: Climate Change** as they are large sites (>20ha) and are expected to generate high volumes of heavy goods vehicle traffic resulting in the production of high levels of carbon dioxide and other GHG emissions. The significant negative effect for site option M23 is combined with a minor positive effect as it is within 800m of two bus stops which would enable employees to easily access the site via sustainable transport. Mixed effects (minor negative/minor positive) are identified for site options M03c and M05f as the sites are within close proximity to sustainable transport links which could be used by employees of the sites thereby reducing transport-related emissions, however there would also be adverse effects on the road network from the increase in HGVs transporting minerals.

SA Objective 11 - Promote effective restoration and appropriate after use of sites

4.78 Significant positive effects are expected for minerals sites with regard to SA objective **11: Restoration**, as the NPPF (2019) states that mineral sites should be reclaimed at the earliest opportunity, taking account of aviation safety, and that high-quality restoration and aftercare of minerals sites takes place.

4.79 The restoration of mineral sites also offers the potential to deliver biodiversity gains in the long term, however, many sites are restored to wetland and grassland habitats which can attract large numbers of species that may in certain circumstances pose a hazard to aircraft. Therefore, a minor negative effect is also identified for site option M22 as it is located in the Gloucestershire Safeguarding Zone, and therefore has potential for adverse impacts on aircraft safety from bird-strike. All effects are uncertain dependent on the type of restoration proposed and eventually developed on sites, which will not be known until the planning application stage.

SA Objective 12 - Value, maintain, restore and expand county biodiversity and geodiversity

4.80 An uncertain significant negative effect is identified for site option M23 as it contains the River Arrow Local Wildlife Site. Uncertain minor negative effects are identified for the remaining reasonable alternative options as the extraction of minerals would create voids and permanently alter the geodiversity of the sites. Furthermore, site option M22 contains habitats listed on the Priority Habitat Inventory. Uncertainty is attached to all effects as it will depend on the design, operation and restoration of extraction sites.

SA Objective 13 - Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces

Site option M22 will have an uncertain significant negative effect with respect to SA objective **13: Landscape** as it is within the Malvern Hills AONB which could have significant adverse effects on the character and special qualities of the AONB. The effect is uncertain as it will depend on the design, operation and restoration of extraction sites. Site options M03c, M05f and M23 are expected to have negligible effects in relation to landscape quality as they do not contain areas of open space, parks or gardens; are in close proximity (<250m) to an AONB; are within an area classified as highly sensitive in The Urban Fringe Sensitivity Analysis; or are within a Green Infrastructure Corridor or a Green Infrastructure Enhancement Zone.

SA Objective 14 - Value, protect and enhance the quality of watercourses and maximise the efficient use of water

4.81 Site option M23 is expected to have an uncertain significant negative effect on SA objective **14: Water** as it intersects with the River Arrow which has a moderate ecological status but is failing in terms of chemical status. Uncertain minor negative effects are identified for site options M05f and M22 as they are either within 250m and 1km of a SSSI waterbody (River Lugg SSSI) or are within 250m of a waterbody that is of 'moderate' ecological or chemical status (Leigh-Cradley Brook).

SA Objective 15 - Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment

4.82 The SFRA did not assess the reasonable alternative mineral sites and therefore the Environment Agency Flood Risk dataset was used to indicate likely flood extents. Site options M03c and M05f are within Flood Zone 1 and are proposed for sand and gravel working which is considered to be a 'water compatible' use and therefore suitable in all flood zones. Negligible effects are identified for site options M03c and M05f for SA objective **15: Flooding**. Site option M23 is predominantly within Flood Zones 2 and 3 and site option M22 contains a small area within Flood Zones 2 and 3. Although the sites are proposed for sand and gravel extraction which is considered suitable in all flood zones, this applies to the mineral working/processing itself and not the associated infrastructure/buildings required to support such developments. Therefore, an uncertain significant negative effect is expected for site option M23 and an uncertain minor negative effect is identified for site option M22.

SA Objective 16 - Minimise noise, light, and air pollution

4.83 Site option M05f is expected to result in an uncertain significant negative effect in relation to SA objective **16: Pollution** as, whilst it is not within an AQMA, it is within 100m of the settlement of Wellington which could lead to adverse effects on residential receptors. The effect is uncertain as the extent of noise, vibration and light pollution will depend on the scale of the operation and the type of activities undertaken within the site. Site options M03c, M22 and M23 are expected to have negligible effects in relation to this SA objective.

SA Objective 17 - Value, protect and enhance soil quality and resources

4.84 Uncertain significant effects are expected for site options M03c and M05f with regard to SA objective **17: Soil** as these sites comprise mainly (>50%) Grade 1, 2 and 3a agricultural land. Development on high quality agricultural land will result in that land being lost to other uses. However, the effects are uncertain as Section 5 of The Town and Country Planning Act 1990 (as amended) requires mineral planning authorities to ensure that restoration meets the required standard (normally to the same physical characteristics as before). Uncertain minor negative effects are identified for site options M22 and M23 as they comprise Grade 3 agricultural land.

Changes in effects since Draft MWLP

4.85 The SA effects identified for reasonable alternative site option M03c in the SA of the Draft MWLP are unchanged in the SA of the Publication Draft MWLP. An uncertain significant negative effect, rather than a negligible effect, has been assigned for site option M05f in relation to SA objective **16: Pollution** as the site is within 100m of residential areas in the settlement of Wellington. Based on the revised assumptions for identifying effects in relation to SA objective **15: Flooding**, an uncertain minor negative effect has been identified for site option M22 as it contains a small area within Flood Zones 2 and 3. Site option M23 was identified as a potential site option in December 2019 and therefore was not previously assessed in the SA of the Draft MWLP.

Table 4.3: Summary of SA effects for reasonable alternative mineral site options

SA Objective	1: Employment	2: Sustainable Economy	3: Health	4: Poverty and Equality	5: Sustainable Transport	6: Historic Environment	7: Built Environment	8: Waste Hierarchy	9: Minerals Resources	10: Climate Change	11: Restoration	12: Biodiversity & Geodiversity	13: Landscape	14: Water	15: Flooding	16: Pollution	17: Soil
M03c	+	+	0	+?	+/	?	0		+	+/	++	?	0	0	0	0	?
M05f	+	+	?	+?	+/	?	?		+	+/	++?	?	0	?	0	?	?

M22	+	+	?	+?		?	0	?	+		++?/ ?	?	?	?	?	0	?
M23	+	+	0	+?	/+	?	0	?	+	/+	++?	?	0	?	?	0	?

SA Findings for the Waste Site Allocations and Strategic Employment Areas

4.86 **Table 4.4** provides an overview of the SA effects (as presented in Appendix I) attributed to each of the eight waste sites and nine Strategic Employment Areas allocated in the Publication Draft MWLP.

SA Objective 1 - Support, maintain or enhance the provision of employment opportunities in the minerals and waste sectors

4.87 All waste site allocations could have a direct and indirect effect on maintaining or increasing employment levels during the development and operation of waste management facilities. Sites W05, W07, W10, W13 and W19 are all expected to maintain and generate employment opportunities in the waste industry and will have minor positive effects with regard to SA objective **1: Employment**. Sites W43, W44 and W45 are mineral sites considered for waste uses, principally the disposal of inert waste in order to recover the land for beneficial purposes. Similarly, minor rather than significant positive effects are expected as the restoration of sites is unlikely to generate significant numbers of jobs.

4.88 The Spatial Context and Sites Report states that Strategic Employment Areas are appropriate for larger scale/strategic waste management facilities. Therefore, uncertain significant positive effects are identified for sites greater than 20ha, i.e. sites W58, W59, W63 and W66, while uncertain minor positive effects are identified for the remaining Strategic Employment Areas as these are likely to generate fewer employment opportunities in the waste industry. Effects are also uncertain for the Strategic Employment Areas as these locations have a reasonably high level of plot turnover and will also depend upon the type and scale of the waste infrastructure development at the Strategic Employment Areas, which would not be known until the planning application stage.

SA Objective 2 - Maintain or enhance conditions that enable a sustainable economy and continued investment

4.89 Sites W05, W07, W10, W13 and W19 are all expected to maintain and enhance conditions that enable a circular economy and therefore will have minor positive effects with regard to SA objective **2: Sustainable Economy**. Minor positive effects are also expected for sites W43, W44 and W45 as the restoration of quarries by inert waste disposal will contribute towards investment in the waste sector.

4.90 As for SA objective 1, uncertain significant positive effects are identified for sites W58, W59, W63 and W66 as these sites, due to their size (>20ha), may significantly enhance investment in the waste industry if large scale/strategic waste management facilities were developed at these locations. Uncertain minor positive effects are identified for the remaining Strategic Employment Areas. Effects are uncertain for the Strategic Employment Areas as these locations have a reasonably high level of plot turnover and will also depend upon the type and scale of the waste infrastructure development at the Strategic Employment Areas, which would not be known until the planning application stage.

SA Objective 3 - Protect and improve the health of the people of Herefordshire, and reduce disparities in health geographically and demographically

4.91 New waste management facilities could have adverse effects on the amenity of local residents and communities as they would result in some level of noise, vibration and light pollution during site preparation, operation and restoration, and through the transportation of waste around and from the site. The extent of noise, vibration and light pollution will depend on the type of waste managed at the site, the scale of the operation and the type of activities undertaken within the site. The extent of the effect experienced will depend on the proximity of sensitive receptors, including schools, residential areas, hospitals, faith centres and churches. In addition, where waste sites contain or intersect areas of open space, Public Rights of Way (PROW) or cycle paths, potential opportunities for recreation/access to the countryside (which has benefits for health) could be lost.

4.92 Site W07 is expected to have an uncertain significant negative effect in relation to SA objective **3: Health** as it is within 100m of the settlement of Leominster and a waste water treatment works facility which could have a cumulative adverse effect on the amenity of the community. The effect is uncertain as this has potentially been addressed through conditions relating to the existing planning permission for the site.

4.93 A mixed effect (uncertain minor positive/uncertain minor negative) is identified for site W45 as it is within 100m of residential areas in the settlements of Wellington and Moreton on Lugg where the disposal of inert waste during the restoration of the site may have adverse effects on the amenity of the nearby communities, however, this effect is

judged to be minor rather than significant and likely to be experienced in the short-term. Furthermore, although two PROWs intersect the site, Section 5 of the Town and Country Planning Act 1990 (as amended) requires mineral planning authorities to ensure that restoration meets the required standard (normally to the same physical characteristics as before), and therefore it is likely that the PROWs will be reinstated as part of the restoration, although this effect is uncertain and dependent on the type of restoration proposed and eventually developed on the site, which will not be known until the planning application stage.

4.94 An uncertain minor negative effect has been identified for site W05 as it intersects a PROW. However, the effect is uncertain as this has potentially been considered and addressed through conditions relating to the existing planning permission for the operational Leominster site.

4.95 Sites W10, W13, W19, W43 and W44 will have negligible effects as they are not within 100m of a sensitive receptor and do not intersect with an area of open space, PROW or cycle path. All of the Strategic Employment Areas will have uncertain negligible effects for this objective as it is assumed that the development of new waste facilities at Strategic Employment Areas will not adversely impact on the health and amenity of nearby communities beyond the effects already experienced at operational industrial or employment sites.

SA Objective 4 - Reduce poverty and social inclusion by closing the gap between the most deprived areas in the county and the rest of the county

4.96 Uncertain minor positive effects are expected for all but one waste site allocation with regard to SA objective **4: Poverty and Equality**, as the allocation of waste sites is expected to result in a small number of jobs during site preparation, operation and restoration which may help to reduce employment deprivation in Herefordshire.

4.97 As for SA objectives 1 and 2, uncertain significant positive effects are identified for site W63 as it may be an appropriate location for a large scale/strategic waste management facility which could create employment opportunities in one of the most deprived areas of Herefordshire. Minor positive effects rather than significant positive effects are expected for W58, W59 and W66 as there is potential for several jobs to be created as part of the development of large scale/strategic waste management facilities thereby helping to reduce employment deprivation, however these sites are not within areas of high deprivation. Minor positive effects are identified for the remaining Strategic Employment Areas (W60, W61, W62, W64, and W65) as these would generate a small number of jobs which may help to reduce employment deprivation. The effects are uncertain and will depend upon the type and scale of the waste infrastructure development at the Strategic Employment Area, which would not be known until the planning application stage.

SA Objective 5 - Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county

4.98 Due to the limited opportunities for rail transport of materials in Herefordshire, there will be a reliance on road transport to transfer waste to and from sites. Therefore, it is assumed that all waste sites have the potential to generate traffic in Herefordshire, however, without detailed information about how the sites will operate (which would be available at the planning application stage), the extent of the negative impact has been assessed using the size of the site as an indication, as it was assumed that larger sites are likely to generate more movements of heavy goods vehicles. The further vehicles transporting waste have to travel along local roads (i.e. not on the primary road network) the higher the potential for traffic and localised pollution as vehicles are likely to travel more slowly on local roads thereby increasing the potential for traffic, and slower moving traffic may result in more pollutant deposition along those routes than vehicles moving at a consistent speed. Moreover, the proximity of sites to public transport links will affect the extent to which employees are able to make use of non-car based modes of transport to commute to and from waste sites.

4.99 Uncertain mixed effects (minor positive/minor negative) are identified for sites W05, W07, W10, W13 and W19. The minor positive effects recognise the proximity to one or two sustainable transport links which will encourage employee use of sustainable transport. The minor negative effects are identified as the operation of these sites is likely to generate traffic. The adverse effects are uncertain for sites W05, W07, W10 and W13 as these have potentially been addressed through existing planning conditions relating to the operational sites.

4.100 Mixed effects (minor positive/minor negative) have been identified for sites W43, W44 and W45 as the machinery and lorries used during the restoration of sites are likely to generate traffic, however, the sites are within close proximity to sustainable transport links which would enable people employed to dispose of inert waste at the former quarries to easily access the sites using sustainable modes of transport. Minor rather than significant negative effects are identified for sites W44 and W45 as, although there is potential for these sites to generate traffic on local roads during restoration as they are more than 250m from a main road or are large in size (>20ha), the restoration is not expected to result in high numbers of lorry movements and the effects are likely to be experienced in the short-term.

4.101 Uncertain minor positive effects may be experienced for all of the Strategic Employment Areas (sites W58-W66) as these may provide opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce transport distances of waste.

SA Objective 6 - Value, protect and enhance the county's historic environment and cultural heritage

4.102 The majority of waste site allocations are expected to have negligible effects with regard to SA objective **6: Historic Environment**. Sites W05, W07, W10 and W13 are expected to have negligible effects as these sites are not adjacent to and do not contain designated heritage features and the continued operation of these active waste sites is not expected to have an effect on the historic environment.

4.103 Negligible effects are identified for sites W43 and W44 as the disposal of inert waste at the quarries is not expected to have an effect on the historic environment as these sites are also not adjacent to and do not contain any designated heritage features. An uncertain minor positive effect is expected for site W45, as the restoration of the former quarry through the disposal of inert waste, may restore the local environment which contributes to the setting of nearby heritage assets, although this effect is uncertain.

4.104 An uncertain negligible effect is identified for site W19, as although the site is not adjacent to and does not contain any designated heritage features, there may be potential for effects on the historic environment depending on the design, scale and layout of the development, which is unknown at this stage.

4.105 Uncertain negligible effects are expected for all of the Strategic Employment Areas (W58 – W66) as the development of new waste facilities at these locations is not expected to adversely impact on the historic environment beyond the effects already experienced at operational Strategic Employment Areas.

SA Objective 7 - Value, protect and enhance the character and built quality of settlements and neighbourhoods

4.106 Uncertain significant negative effects are expected with regard to SA objective **7: Built Environment** for sites W05, W07, W10 and W19 as they are within close proximity (100m) of a settlement, and, as such, may have adverse effects on the character of the area. For sites W05, W07 and W10, the effects are uncertain as these have potentially been addressed through existing planning conditions relating to the operational sites. The effect for site W19 is also uncertain as it is dependent on the design of the development and the contribution the land makes to the local distinctiveness and setting of an area.

4.107 An uncertain minor positive effect is expected for site W45, as the restoration of the former quarry through the disposal of inert waste, could positively contribute to the character of nearby settlements Wellington and Moreton-on-Lugg. The effect is uncertain as it is dependent on the type of restoration proposed and eventually developed on a site, which will not be known until the planning application stage.

4.108 Negligible effects have been identified in relation to sites W13, W43 and W44 as these are not within close proximity of a settlement and are therefore unlikely to have an effect on the character of settlements.

4.109 The development of new waste facilities at Strategic Employment Areas (sites W58-W66) is not expected to adversely impact on the character and built quality of settlements and neighbourhoods beyond the effects already experienced at the employment sites. Therefore, uncertain negligible effects are expected for all Strategic Employment Areas.

SA Objective 8 - Move treatment of waste up the waste hierarchy

4.110 Uncertain significant positive effects are identified for waste site allocations W05, W07 and W10 in relation to SA objective **8: Waste Hierarchy** as they are operational household waste recycling centres which process waste that would otherwise be landfilled. Site W13 is operational and recovers construction, demolition and excavation waste which, if expanded, would have a significant positive effect on the recovery of waste. Effects are uncertain as these sites may be used for different wastes or different technologies than are currently present.

4.111 Mixed effects (uncertain significant positive/uncertain minor negative) are expected for W19 as the site may provide energy recovery facilities, either biological (such as anaerobic digestion) which would have a significant positive effect, or combustion with energy recovery (such as incineration or gasification) which would have a minor negative effect on driving waste up the waste hierarchy.

4.112 Minor negative effects have been identified for sites W43, W44 and W45 as these are identified in the MWLP as appropriate locations for the disposal of inert waste, which is judged to have negative effects in terms of moving the treatment of waste up the waste hierarchy.

4.113 Uncertain minor positive effects may be experienced for Strategic Employment Areas (sites W58-W66) as there may be opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which would encourage reuse and recycling of waste and contribute to the circular economy.

SA Objective 9 - Promote sustainable use of mineral resources

4.114 Minor positive effects are identified for sites W13, W43, W44 and W45 in respect to SA objective **9: Mineral Resources** as these sites are either former quarries (W13) or involve inert waste disposal to restore quarries (W43, W44 and W45) which means that mineral resources at these sites would already have been extracted and could not be sterilised. Negligible effects are identified for sites W05, W07, W10 and W19.

4.115 The development of new waste facilities at Strategic Employment Areas (sites W58-W66) is not expected to adversely impact mineral resources because these sites have already been developed. Therefore, uncertain negligible effects are expected for the Strategic Employment Areas.

SA Objective 10 - Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem

4.116 As explained under SA objective 5, there are limited opportunities for transport of materials using sustainable modes and therefore there will be a reliance on road transport which will increase the emission of greenhouse gases. Therefore, it is assumed that all waste sites have the potential to generate traffic in Herefordshire, however, without detailed information about how the sites will operate (which would be available at the planning application stage), the extent of the negative impact has been assessed using the size of the site as an indication as it was assumed that larger sites are likely to generate more movements of heavy goods vehicles resulting in the production of higher levels of carbon dioxide and other greenhouse gas emissions. The further vehicles transporting waste have to travel along local roads (i.e. not on the primary road network) the higher the potential for traffic and localised pollution as vehicles are likely to travel more slowly on local roads thereby increasing the potential for traffic, and slower moving traffic may result in more pollutant deposition along those routes than vehicles moving at a consistent speed. Moreover, the proximity of sites to public transport links will affect the extent to which employees are able to make use of non-car based modes of transport to commute to and from waste sites.

4.117 Uncertain mixed effects (minor positive/minor negative) are identified for sites W05, W07, W10, W13 and W19 in relation to SA objective **10: Climate Change**. The minor positive effects recognise the proximity to one or two sustainable transport links which will encourage employee use of sustainable transport, thereby reducing local traffic emissions. The minor negative effects are identified as the operation of these sites is likely to generate local traffic and consequently the release of greenhouse gases. The adverse effects are uncertain for sites W05, W07, W10 and W13 as the impact from traffic generation and therefore transport emissions have potentially been considered and addressed through existing planning conditions relating to the operational sites.

4.118 Mixed effects (minor positive/minor negative) have been identified for sites W43, W44 and W45 as the machinery and lorries used during the restoration of sites are likely to generate traffic and emissions, however, the sites are within close proximity to sustainable transport links which would enable people employed to dispose of inert waste at the former quarries to easily access the sites using sustainable modes of transport thereby reducing CO_2 emissions. Minor rather than significant negative effects are identified for sites W44 and W45 as, although there is potential for these sites to generate traffic on local roads and localised air pollution during restoration as they are more than 250m from a main road or are large in size (>20ha), the restoration is not expected to result in high numbers of lorry movements and the effects are likely to be experienced in the short-term.

4.119 Uncertain minor positive effects may be experienced for all of the Strategic Employment Areas (sites W58-W66) as these may provide opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce transport distances of waste and transport-related emissions.

SA Objective 11 - Promote effective restoration and appropriate after use of sites

4.120 The NPPG on Waste requires landfill sites to be restored to beneficial after-uses at the earliest opportunity and to high environmental standards. However, there are no operational or proposed landfill sites in Herefordshire. Uncertain negligible effects are expected for five waste site allocations and nine Strategic Employment Areas in relation to SA objective **11**: **Restoration** as the restoration of other types of waste management sites when they are no longer required may also be undertaken however, this is not promoted in the NPPG on Waste and would be dependent on when the waste facility ceased to operate which could be any number of years.

4.121 NPPF (2019) states that mineral sites should be reclaimed at the earliest opportunity, taking account of aviation safety, and that high-quality restoration and aftercare of minerals sites takes place. Therefore, uncertain significant positive effects are identified for inert landfill sites W43, W44 and W45 as the NPPF requires high quality restoration and aftercare following the working of a site. The significant positive effect identified for site W44 is combined with a minor negative effect as the site is located within the Shobdon Aerodrome Safeguarding Zone and therefore has potential for

adverse impacts on aircraft safety from bird-strike should the site be restored to wetland or grassland habitats which can attract large numbers of species that may in certain circumstances pose a hazard to aircraft.

4.122 Effects are uncertain for all waste site allocations as these are dependent on the type of restoration proposed and eventually developed on site, which will not be known until planning application stage.

SA Objective 12 - Value, maintain, restore and expand county biodiversity and geodiversity

4.123 Waste sites that contain or are close to an internationally, nationally or locally designated conservation site have the potential to affect the biodiversity or geodiversity of those sites, e.g. through habitat/geology damage/loss, fragmentation, disturbance to species as well as air and noise pollution. Depending on the type of waste facility, there is potential for vermin, gulls and corvids (crow family) to be attracted to the site which may prey upon species, particularly the eggs and young of nesting birds. The potential impact on biodiversity and geodiversity present on each site, or adjacent to the potential waste sites, cannot be determined with certainty at this strategic level of assessment. This would be determined once more specific proposals are developed and submitted as part of a planning application. Therefore, as an indication of the likelihood of significant negative effects, proximity of designated biodiversity and geodiversity conservation sites to potential waste sites has been used. Uncertainty is attached to all effects as it will depend on the design, operation and restoration of waste sites.

4.124 Uncertain significant negative effects are expected for sites W05 and W13 for SA objective **12: Biodiversity & Geodiversity** as they are located within 250m of the River Lugg SSSI and/or the River Wye SAC. An uncertain significant negative effect (as part of a mixed effect) is also identified for site W45 at Wellington Quarry as it is adjacent to the River Wye SAC and the River Lugg SSSI. The HRA Report (LUC, 2020) identifies that inert waste disposal site W45 and the presence of potentially functionally linked habitat that may be used by otter may result in LSEs both as a result of direct (onsite) and indirect (offsite) physical loss and damage, non-physical disturbance (noise, vibration and light pollution), and non-toxic contamination.

4.125 Uncertain minor negative effects are expected for sites W10 and W19 as these sites are both located within Green Infrastructure Enhancement Zones. Furthermore, site W19 is also located between 250m and 1km of the River Wye SAC. There is the potential for adverse effects on biodiversity as waste sites within a GI area may fragment ecological areas and green spaces thereby impacting on species movement.

4.126 Uncertain minor positive effects are identified for sites W43, W44 and W45 (for W44 and W45 as part of a mixed effect) as these sites are proposed for inert waste disposal following extraction which offers the potential to deliver biodiversity gains in the long term as restoration often involves the creation of species rich wetland or grassland habitats. An uncertain minor negative effect is identified for site W44 (as part of a mixed effect) as the site within the Shobdon Aerodrome Safeguarding Zone where there is potential for bird-strike from aircrafts should the site be restored to wetland or grassland habitats which can attract large numbers of species that may in certain circumstances pose a hazard to aircraft.

4.127 Site W07 is identified as having uncertain negligible effects as it does not contain, or is unlikely to have an adverse impact on any internationally, nationally or locally designated biodiversity or geodiversity sites and is not located within either a Green Infrastructure Corridor or Enhancement Zone or contain any areas listed on the Priority Habitats Inventory.

4.128 The development of new waste facilities at Strategic Employment Areas (sites W58-W66) is not expected to have an adverse impact on biodiversity or geodiversity beyond the effects already experienced at operational industrial or employment sites. Therefore, uncertain negligible effects are expected for the Strategic Employment Areas.

SA Objective 13 - Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces

4.129 The potential impact on landscape quality of Herefordshire cannot be determined with certainty at this strategic level of assessment. This would be determined once more specific proposals are developed and submitted as part of a planning application. Therefore, as an indication of the likelihood of significant negative effects, proximity of landscape designations to potential waste sites has been used. Uncertainty is attached to all effects as it will depend on the design, operation and restoration of waste sites.

4.130 Uncertain minor negative effects are identified in relation to SA objective **13: Landscape** for sites W05, W10 and W19 as these sites are located within Green Infrastructure Corridors and/or Enhancement Zones. Site allocations within GI areas could contribute to fragmentation of these assets thereby reducing their positive contribution to character and local distinctiveness. Effects are uncertain for operational sites as adverse impacts have potentially been addressed through conditions relating to the existing planning permission (sites W05 and W10) or in the case of site W19 will depend on the design and scale of the waste facility which is unknown at this stage.

4.131 Uncertain minor positive effects are expected for sites W43, W44 and W45 as the disposal of inert waste will restore the quality of the landscape at the former mineral sites. However, the effects are uncertain, and dependent on the type of restoration proposed and eventually developed on a site, which will not be known until the planning application stage.

4.132 Sites W07 and W13 have been identified as having negligible effects in relation to landscape quality. This is because these sites do not contain areas of open space, parks or gardens; are not in close proximity (<250m) to an AONB; are not within an area classified as highly sensitive in The Urban Fringe Sensitivity Analysis; or are not within a Green Infrastructure Corridor or a Green Infrastructure Enhancement Zone.

4.133 The development of new waste facilities at Strategic Employment Areas (sites W58-W66) is not expected to adversely impact the landscape beyond the effects already experienced at operational industrial or employment sites. Therefore, uncertain negligible effects are expected for the Strategic Employment Areas.

SA Objective 14 - Value, protect and enhance the quality of watercourses and maximise the efficient use of water

4.134 Waste sites can potentially pose a pollution risk to water resources from residual liquids or leachate. Waste sites also pose a risk to current vulnerable waterbodies where there is a hydrological link, as well as to SSSI or SAC waterbodies as they could result in effects on water quality.

4.135 Uncertain significant negative effects are identified for sites W05, W07, W13, and W44 for SA objective **14: Water** as these are either within a Source Protection Zone and/or are within 250m of a waterbody classified as being in 'bad' ecological status or is failing in terms of its chemical status. The effects are uncertain as they have potentially been considered and addressed through existing planning conditions relating to the operational sites.

4.136 An uncertain significant negative effect is also identified for site W45 at Wellington Quarry as it intersects with Wellington Brook which has a poor ecological status and is failing in terms of its chemical status. The site is also directly adjacent to the River Wye SAC and the River Lugg SSSI which has a moderate ecological status but is failing in terms of its chemical status. The HRA Report (LUC, 2020) identifies that site W45 shares direct hydrological connectivity with the River Wye SAC, either through sharing boundaries or via field drains. However, as this allocation relates to the disposal of inert waste which is non-reactive both chemically and biologically, the potential for activities at this site to result in changes in water quality which would be considered significant is low. Nevertheless, in the absence of appropriate safeguards and mitigation measures, the potential for operations at this site to harm the qualifying features of the SAC, for example through plant washing, chemical spills and pollution events, and surface water run-off, cannot be excluded.

4.137 Uncertain minor negative effects are identified for one waste site allocation, W19, as this site is within 1km of the River Wye SSSI waterbody. Negligible effects are identified for sites W10 and W43 as they are not within a Source Protection Zone; within 250m of a vulnerable waterbody; or within 1km of a SSSI or SAC waterbody, and therefore are not likely to affect water quality.

4.138 The development of new waste facilities at Strategic Employment Areas (W58 – W66) is not expected to have adverse impacts on the water environment beyond the effects already experienced at operational industrial or employment sites. Therefore, uncertain negligible effects are expected for all of these sites.

SA Objective 15 - Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment

4.139 The 2018 SA of the Draft MWLP used the Environment Agency Flood Zones dataset to indicate likely effects in relation to flooding. However, However, the Level 1 SFRA was finalised in 2019 while the detailed Level 2 SFRA of the Herefordshire MWLP was finalised in January 2020 and therefore the assessment of effects against SA objective **15: Flooding** have been revised in this SA of the Publication Draft MWLP to refer to the SFRAs. The Level 2 SFRA[28] builds on the Herefordshire Level 1 SFRA[29] providing a more detailed assessment of flood risk at a number of sites identified by the Council in the Draft MWLP that may be at risk of flooding. It considers their vulnerability in accordance with the requirements of the Sequential and Exception Tests.

4.140 National Planning Practice Guidance identifies landfills and sites used for waste management facilities for hazardous waste as a 'more vulnerable use', which is suitable in areas of Flood Zone 1 and 2 but would require an exception test in Flood Zone 3a (high probability of flooding), and is unsuitable in Flood Zone 3b (the functional flood plain). Waste treatment (except landfill and hazardous waste facilities) is classed as 'less vulnerable' and therefore considered suitable

[28] Herefordshire Council (2020) Herefordshire Mineral and Waste Local Plan Level 2

[29] Herefordshire Council (2019) Herefordshire Mineral and Waste Local Plan Level 1 [online] https://www.herefordshire.gov.uk/directory-record/2111/strategic-flood-risk-assessment

in Flood Zones 1, 2 and 3a but unsuitable in Flood Zone 3b (the functional flood plain).

4.141 The SFRA states that all eight waste site allocations and nine Strategic Employment Areas pass the Sequential Test and are appropriate for proposed development as set out in the MWLP, noting that a sequential approach may still need to be applied to steer development to areas at lowest flood risk. Where flood risks areas have been identified and the Exception Test is required, it is likely that this can be best managed through the appropriate location of more vulnerable development in areas at lower flood risk and, where required, there are feasible mitigation measures that can be implemented to manage these risks without increasing flood risk elsewhere. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and shallow infiltration and attenuated discharge to nearby watercourses. Nevertheless, in the absence of appropriate safeguards and mitigation measures outlined in the SFRA, the potential for the development of these sites to have a negative effect on this SA objective, cannot be excluded.

4.142 Eight sites (W13, W45, W58, W60, W61, W62, W63, W64 and W66) are expected to have uncertain significant negative effects in relation to SA objective **15: Flooding** as they are within Flood Zones 2, 3a or 3b or are likely to increase flood risk elsewhere. The SFRA requires a Sequential Test to demonstrate no other suitable sites at a lower risk of flooding are available and/or an Exception Test is required for more vulnerable development. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and, shallow infiltration and attenuated discharge to nearby watercourses.

4.143 Seven sites (W05, W07, W19, W43, W44, W59 and W65) are identified as having uncertain minor negative effects as they are within Flood Zone 1 but are at risk from other sources of flooding (e.g. surface water flooding due to site topography). The SFRA notes that these sites are not considered to be at notable flood risk but that it is still important that future applications for these sites are in line with the Level 1 SFRA and that a detailed drainage strategy and (if required) site-specific flood risk assessment are submitted to support the planning application. These sites all pass the Sequential Test and Exception Test. A negligible effect is expected for site W10 as it is located within Flood Zone 1 and is not at risk from other sources of flooding.

4.144 Uncertain minor positive effects are identified for sites W43, W44 and W45 (as part of overall mixed effects) as the restoration of sites through the disposal of inert waste will help to increase permeable land cover in the county which will contribute towards flood attenuation. Furthermore, the restoration of sites could create new wetland habitat that provides flood storage. Effects are uncertain as they will depend on the restoration plan for the site.

SA Objective 16 - Minimise noise, light, and air pollution

4.145 There are two AQMAs in Herefordshire – the Hereford AQMA and the Bargates Leominster AQMA. All new development in AQMAs (regardless of the use specified) has the potential to aggravate local air quality in terms of a resultant increased number of journeys during the construction, extraction and operational phases thereby compounding existing air quality problems. Sensitive receptors include residential areas, schools, hospitals, faith centres (e.g. churches, mosques, temples). Waste sites would result in some level of noise, vibration and light pollution during site preparation, operation and restoration and associated with the transport of waste around and from the site.

4.146 There are no waste sites within either the Hereford AQMA or the Bargates Leominster AQMA. Uncertain significant negative effects have been identified for sites W05, W07 and W10 for SA objective **16: Pollution** as they are within 100m of residential areas in at least one settlement. The effects are uncertain as impacts from air, light and noise pollution have potentially been considered in the planning applications and addressed through existing planning conditions relating to the operational sites.

4.147 An uncertain significant negative effect is expected for site W45 as it is within 100m of residential areas in the settlements of Wellington and Moreton on Lugg. The disposal of inert waste during the restoration of the site may result in noise pollution.

4.148 Negligible effects are identified for sites W13, W19, W43 and W44 as they are not within an AQMA or within 100m of a sensitive receptor.

4.149 The development of new waste facilities at the nine Strategic Employment Areas is not expected to have an adverse impact on air, light or noise pollution beyond the effects already experienced at operational industrial or employment sites. Therefore, uncertain negligible effects are expected for the Strategic Employment Areas.

SA Objective 17 - Value, protect and enhance soil quality and resources

4.150 The majority of Herefordshire consists of Grade 2 and Grade 3 agricultural land. There are scattered areas of Grade 1 land and some areas of lower quality, Grades 4 and 5, particularly in the west of the country.

4.151 An uncertain significant negative effect is identified for site W10 as this site comprises entirely Grade 2 agricultural land. Development on high quality agricultural land

(Grade 1, 2 and 3a) would result in that land being lost to other uses. The effect is uncertain as the loss of 'Best and Most Versatile Agricultural Land' is presumed to have been considered in the planning application for the operational site.

4.152 Uncertain minor negative effects are identified for sites W05, W13 and W19 as these are located on Grade 3 agricultural land. Effects are uncertain as the loss of Grade 3 agricultural land at operational sites are likely to have already been addressed through conditions relating to the existing planning permission. Site W07 is assessed as having a negligible effect as it is located within an urban setting and therefore no agricultural soils will be adversely impacted.

4.153 Uncertain minor positive effects are identified for sites W43, W44, and W45 as these sites comprise mainly Grade 2 or 3a agricultural land or Grade 3 agricultural land, respectively. These sites are proposed as appropriate locations for the disposal of inert waste as part of the restoration of former mineral sites. Section 5 of The Town and Country Planning Act 1990 (as amended) requires mineral planning authorities to ensure that restoration meets the required standard (normally to the same physical characteristics as before). Therefore, positive effects are identified as restoration may safeguard the long-term potential of Best and Most Versatile Agricultural Land and other soil resources, however, the effects are uncertain, and dependent on the type of restoration proposed and eventually developed on the sites, which will not be known until the planning application stage.

4.154 The development of new waste facilities at Strategic Employment Areas (sites W58-W66) is not expected to adversely impact on the soil environment beyond the effects already experienced at operational industrial or employment sites. Therefore, uncertain negligible effects are expected for the Strategic Employment Areas.

Changes in effects since Draft MWLP

4.155 The sustainability effects in relation to SA objective **4: Poverty and Equality** for sites W58, W59 and W66 have been revised from uncertain significant positive effects to uncertain minor positive effects, as although there is potential for several jobs to be created as part of the development of large scale/strategic waste management facilities at these sites thereby helping to reduce employment deprivation, these sites are not within areas of high deprivation.

4.156 Uncertain minor positive effects were identified for five waste site allocations (W05, W07, W10, W13 and W19) and all Strategic Employment Areas in relation to SA objective **11: Restoration** in the SA of the Draft MWLP. However, these effects have been revised to uncertain negligible effects as the restoration of other types of waste management sites when they are no longer required may also be undertaken however, this is not promoted in the NPPG on Waste and would be dependent on when the waste facility ceased to operate which could be any number of years.

4.157 Due to the changes in the status of many of the rivers in Herefordshire from the WFD River Waterbody Catchments 2016 Cycle 2 to the 2019 Cycle 2, the sustainability effects in relation to SA objective **14: Water** have been revised. The sustainability effects of sites W07 and have been revised from uncertain minor positive to uncertain significant positive, as site W07 is within 250m from the River Leadon which is of moderate ecological status but is failing in terms of its chemical status and site W44 is within 250m of Pinsley Brook which is of 'poor' ecological status and is also failing in terms of its chemical status.

4.158 The 2018 SA of the Draft MWLP used the Environment Agency Flood Zones dataset to indicate likely effects in relation to flooding. However, the Level 1 SFRA was finalised in 2019 while the detailed Level 2 SFRA of the Herefordshire MWLP was finalised in January 2020 and therefore the assessment of effects against SA objective **15: Flooding** has been revised in this SA of the Publication Draft MWLP to refer to the Level 1 and Level 2 SFRAs. In the Draft MWLP SA Report all waste sites (excluding W43, W44 and W45) and Strategic Employment Areas were identified as having negligible effects in relation to SA objective **15: Flooding** with minor positive effects identified for sites W43, W44 and W45 as the restoration of sites through the disposal of inert waste will help increase permeable land cover in the county which will contribute towards flood attenuation.

4.159 However, based on the detailed information for each waste site and Strategic Employment Area in the Level 2 SFRA, the effects have been revised to an uncertain significant negative effects for eight waste sites and Strategic Employment Areas (W13, W45, W58, W60, W61, W62, W63, W64 and W66); uncertain minor negative effects for seven waste sites and Strategic Employment Areas (W05, W07, W19, W43, W44, W59 and W65); a negligible effect for site W10; and, uncertain minor positive effects for sites W43, W44 and W45 (as part of overall mixed effects).

Table 4.4: Summary of SA effects for the waste site allocations

SA Objective	1: Employment	2: Sustainable Economy	3: Health	4: Poverty and Equality	5: Sustainable Transport	6: Historic Environment	7: Built Environment	8: Waste Hierarchy	9: Minerals Resources	10: Climate Change	11: Restoration	12: Biodiversity & Geodiversity	13: Landscape	14: Water	15: Flooding	16: Pollution	17: Soil
W05	+	+	?	+?	+/ ?	0	?	++?	0	+/ ?	0?	?	?	?	?	?	?
W07	+	+	?	+?	+/ ?	0	?	++?	0	+/ ?	0?	0?	0	?	?	?	0
W10	+	+	0	+?	+/ ?	0	?	++?	0	+/ ?	0?	?	?	0	0	?	?
W13	+	+	0	+?	+/ ?	0	0	++?	+	+/ ?	0?	?	0	?	?	0	?
W19	+	+	0	+?	+/	0?	?	++?/ ?	0	+/	0?	?	?	?	?	0	?
W43	+	+	0	+?	+/	0	0		+	+/	++?	+?	+?	0	+?/ ?	0	+?
W44	+	+	0	+?	+/	0	0		+	+/	++?/ ?	+?/ ?	+?	?	+?/ ?	0	+?
W45	+	+	+?/ ?	+?	+/	+?	+?		+	+/	++?	+?/ ?	+?	?	+?/ ?	?	+?
W58	++?	++?	0?	+?	+?	0?	0?	+?	0?	+?	0?	0?	0?	0?	?	0?	0?
W59	++?	++?	0?	+?	+?	0?	0?	+?	0?	+?	0?	0?	0?	0?	?	0?	0?
W60	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	0?	0?	0?	0?	?	0?	0?
W61	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	0?	0?	0?	0?	?	0?	0?
W62	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	0?	0?	0?	0?	?	0?	0?
W63	++?	++?	0?	++?	+?	0?	0?	+?	0?	+?	0?	0?	0?	0?	?	0?	0?
W64	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	0?	0?	0?	0?	?	0?	0?
W65	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	0?	0?	0?	0?	?	0?	0?
W66	++?	++?	0?	+?	+?	0?	0?	+?	0?	+?	0?	0?	0?	0?	?	0?	0?

Chapter 5
Sustainability Appraisal Findings of the Publication Draft Herefordshire Minerals and Waste Local Plan Policies

Introduction

5.1 This chapter describes the SA findings of the Vision, the 12 strategic objectives and the 17 policies proposed in the Herefordshire Minerals and Waste Local Plan (contained in chapters 4-7 inclusive). The findings are summarised below, grouped in line with the chapters of the MWLP.

5.2 The MWLP also contains Core Strategy policies that are directly relevant to minerals and waste development:

- Sustainable development policy - SS1
- Movement and transportation policies – SS4 and MT1
- Environmental quality and local distinctiveness policies – SS6, LD1, LD2, LD3 and LD4
- Climate change policy – SS7
- Open space policies OS1 and OS3
- Sustainable design and energy efficiency policy - SD1
- Renewable and low carbon energy generation policy - SD2
- Sustainable water management and water resources policy - SD3

5.3 These policies have previously been subject to SA in 2015 and were found 'sound' at the Examination. Therefore, the Core Strategy policies are not reassessed in this SA Report.

5.4 The SA matrices prepared for the policies are presented in **Appendix J**. Where policies have a spatial element i.e. they refer to specific mineral or waste sites, these have been appraised with reference to GIS data and the findings of the relevant site appraisals in **Appendices H and I**, where appropriate (relates to policies M3, M4, M5, W5 and W6).

Chapter 4 – Vision, Objectives and Spatial Strategy

5.5 This section relates to the Vision and strategic objectives that are presented in Chapter 4 of the MWLP.

Vision

5.6 The Vision for the Herefordshire Minerals and Waste Local Plan sets out a positive vision for the sustainable provision of minerals supply and waste management to be achieved by the end of the plan period in 2041. The table below summarises the SA effects for the Vision.

Table 5.1: Summary of SA effects for the Vision in Chapter 4

SA Objective	Vision
1: Employment	+
2: Sustainable Economy	+
3: Health	+
4: Poverty and Equality	+
5: Sustainable Transport	+/
6: Historic Environment	+
7: Built Environment	+
8: Waste Hierarchy	++
9: Minerals Resources	++
10: Climate Change	+
11: Restoration	+
12: Biodiversity & Geodiversity	+
13: Landscape	+
14: Water	+
15: Flooding	+
16: Pollution	+
17: Soil	+

5.7 Significant positive effects have been identified for SA objectives **8: Waste Hierarchy** and **9: Mineral Resources** as the Vision promotes the sustainable provision of minerals and waste management through the efficient use of mineral resources and by supporting the circular economy.

5.8 Minor positive effects are expected for SA objectives **1: Employment, 2: Sustainable Economy** and **4: Poverty and Equality** as the Vision seeks to strengthen the local economy which will generate employment opportunities in the minerals and waste industries in Herefordshire. Positive effects are identified for SA objectives **12: Biodiversity & Geodiversity, 13: Landscape, 14: Water, 15: Flooding,** and **17: Soil** as the Vision supports the sustainable provision of minerals and waste management that protect and enhance environmental assets which is assumed to include biodiversity, geodiversity, landscapes and habitats, ground and surface waters, and Best and Most Versatile Agricultural Land.

5.9 The previous SA recommended that the Vision include reference to the restoration of sites to a high standard. The Vision has been subsequently amended to seek a strategic approach to reclamation. The Vision now supports high quality reclamation and betterment of mineral and waste sites, including the establishment of green infrastructure and public open space which will have a direct positive effect on SA objective **11: Restoration** and secondary beneficial effects for biodiversity, landscape, public health, and the water and soil environments.

5.10 Minor positive effects are expected for SA **objectives 3: Health, 6: Historic Environment** and **7: Built Environment** as the Vision seeks to support the county's communities, and protect and enhance historic and cultural assets whilst achieving sustainable provision of minerals and waste management.

5.11 Minor positive effects are identified for SA objectives **10: Climate Change** and **16: Pollution** as the Vision supports the waste hierarchy and a circular economy which will reduce energy use and greenhouse gas emissions by diverting waste from landfills, support the use of materials and products more efficiently and reduce the consumption of primary resources. Waste management sites also provide opportunities for renewable energy generation and improved food and agricultural waste management measures that provide the opportunity to sequester carbon.

5.12 Mixed effects (minor positive/minor negative) are identified for SA objective **5: Sustainable Transport** as the Vision does not promote the sustainable transportation of minerals and waste. Although the transport of minerals and waste is likely to continue to be predominantly by road, there is potential for minerals to be transported by rail (currently the Moreton-on-Lugg railhead is used to transport minerals from Wellington Quarry to the south east of England) and one of the strategic objectives (8) promotes the use of alternatives to road transport. The minor positive effect is identified as the Vision does support a circular economy and the waste hierarchy which will reduce the transportation of waste being sent to landfill for disposal.

Strategic objectives

5.13 **Table 5.2** provides a summary of the SA effects for the 12 strategic objectives of the MWLP. Strategic objectives 1-4 relate to social progress, objectives 5-8 to economic prosperity, and objectives 9-12 to environmental quality.

Table 5.2: Summary of SA effects for the Strategic Outcomes in Chapter 4

SA Objective	SO1: Health	SO2: Efficient Use of Minerals	SO3: Safeguarding	SO4: Waste Hierarchy	SO5: Economy	SO6: Supply of Minerals	SO7: Waste Management	SO8: Sustainable Transport	SO9: Suitable Locations	SO10: Design	SO11: Climate Change	SO12: Environment
1: Employment	0	+	+	+	+	+	+	0	+	0	0	0
2: Sustainable Economy	0	+	+	+	++	++	++	+	+	0	0	0
3: Health	++	+	+?/ ?	+	+/ ?	+?/ ?	+?/ ?	+?	+?/ ?	+	+	+
4: Poverty and Equality	0	+	+	+	+	+	+	0	+	0	0	0
5: Sustainable Transport	+?	+	+/	+	+/ ?	+/ ?	+/ ?	++	+?/ ?	0	+?	0
6: Historic Environment	+	+	+/ ?	+	+/ ?	+?/ ?	+?	+?	+/ ?	+	+	++
7: Built Environment	+	+	+/ ?	+	+/ ?	+?/ ?	+?	+?	+/ ?	+	+	++
8: Waste Hierarchy	0	+	0	++	++	0	++	0	+	0	+	0
9: Minerals Resources	0	++	++	++	+/	+	+	0		0	+	0
10: Climate Change	+?	+	+/	+	+/ ?	+/ ?	+/ ?	+	+?/ ?	0	++	0
11: Restoration	+	0	0	0	+?	+?	0	0	0	+?	+?	+?
12: Biodiversity & Geodiversity	+	+	+	+	+?/ ?	+?/ ?	+?/ ?	+?	+/ ?	+	+	++
13: Landscape	+	+	+/ ?	+	+/ ?	+?/ ?	+?/ ?	+?	+/ ?	+	+	++
14: Water	+?	+	?	+	+/ ?	?	+?/ ?	0	+/ ?	+	+	++
15: Flooding	+?	+	+/ ?	0	+/ ?	+?/ ?	+?/ ?	0	+/ ?	+	+	++
16: Pollution	+?	+	?	+	+/ ?	+/ ?	+/ ?	+	+?/ ?	0	++	0
17: Soil	+	+	+?/ ?	+	+?/ ?	+?/ ?	+?/ ?	0	+/ ?	+	+	++

5.14 Positive effects are identified for the majority of strategic objectives in relation to SA objectives **1: Employment, 2: Sustainable Economy** and **4: Poverty and Equality** as they support the development and growth of the minerals and waste economy, and the generation of employment opportunities in Herefordshire. Significant positive effects are identified for SA objective **2: Sustainable Economy** as strategic objectives 5 (Economy), 6 (Supply of Minerals) and 7 (Waste Management) seek to ensure there is a steady supply of minerals and the adequate provision of waste management infrastructure which will encourage investment in the minerals and waste industry.

5.15 Six of the 12 strategic objectives will have a minor positive effect on SA objective **3: Health** as these objectives support: the long-term conservation and efficient use of minerals which may reduce adverse impacts on health and amenity incurred from the development of new mineral sites; the management of waste in accordance with the waste hierarchy and the use of alternatives to road transport which will reduce negative effects such as air and noise pollution; the delivery of green infrastructure as part of developments; and, the protection, conservation and enhancement of the county's natural, built, heritage and cultural assets which may improve health, wellbeing and quality of life. Strategic objective 1

(Health) will have a significant positive effect as it directly supports minerals and waste developments that make an appropriate contribution to improving health, well-being and quality of life of residents. Mixed effects (uncertain minor positive/uncertain minor negative) are expected for strategic objectives 3 (Safeguarding), 5 (Economy), 6 (Supply of Minerals), 7 (Waste Management) and 9 (Suitable Locations) as it is possible that by identifying and safeguarding mineral and waste sites and their infrastructure, the effects associated with the operation of these developments (e.g. dust, noise, odour, vibration and traffic levels) may have a negative impact on health and amenity, however, it is also possible that such developments may improve health and amenity through the delivery of green infrastructure, enhanced public rights of way, or improved access to recreation as part of the development and restoration of sites.

5.16 A significant positive effect is identified for strategic objective 8 (Sustainable Transport) for SA objective **5: Sustainable Transport** as it seeks to reduce the need to travel and lessen the harmful impacts from traffic growth, promote the use of alternatives to road transport and ensure that new development is served by sustainable transport networks. Minor positive effects are identified for four strategic objectives as they support practices that reduce the transportation of waste and minerals and the use of alternatives to road transport. Mixed effects (either minor positive/minor negative or minor positive/uncertain minor negative or uncertain minor positive/uncertain minor negative) are identified for strategic objectives 3 (Safeguarding), 5 (Economy), 6 (Supply of Minerals), 7 (Waste Management) and 9 (Suitable Locations) as identifying and safeguarding mineral and waste sites may reduce the need for importing minerals and transporting waste further afield for processing, however, there may also be increased traffic levels from the operation of these developments.

5.17 Significant positive effects are expected for strategic objective 12 (Environment) in relation to SA objectives **6: Historic Environment** and **7: Built Environment** as it supports the protection, conservation and enhancement of historic assets, and the use of local building stone to help maintain and improve the quality of the built environment and local distinctiveness. Minor positive effects are identified for seven strategic objectives as they support the delivery of green infrastructure as part of developments or the restoration of sites which can contribute to the setting of heritage assets; and, the use of sustainable transport modes which can reduce adverse effects on the setting, fabric and structure of the built environment/heritage assets from emissions and vibration. Mixed effects (either uncertain minor positive/uncertain minor negative or minor positive/uncertain minor negative) are identified for strategic objectives 3 (Safeguarding), 5 (economy), 6 (Supply of Minerals) and 9 (Suitable Locations) as safeguarding and identifying sites for mineral and waste developments may lead to more mineral extraction activities that could have adverse impacts on the historic and built environments if the resource lies in close proximity to any heritage assets. However, uncertain minor positive effects may be experienced as it is possible to locate waste developments away from heritage assets or sensitive built environments.

5.18 Strategic objectives 4 (Waste Hierarchy), 5 (Economy) and 7 (Waste Management) will have significant positive effects on SA objective **8: Waste Hierarchy** as they promote the management of waste in accordance with the circular economy and the adequate provision of waste management infrastructure in Herefordshire.

5.19 Significant positive effects are identified for strategic objectives 2 (Efficient Use of Minerals), 3 (Safeguarding) and 4 (Waste Hierarchy) in relation to SA objective **9: Mineral Resources** as they seek to safeguard mineral resources and promote resource efficiency which directly support the SA objective. Minor positive effects are expected for strategic objectives 6 (Supply of Minerals) and 7 (Waste Management) as they support a steady and sustainable supply of minerals which will ensure that resources are worked carefully and minerals are used in accordance with the Waste Hierarchy (i.e. through the use of recycled and secondary aggregates). A minor positive effect is also identified for objective 11 (Climate Change) as it supports mineral and waste developments that help adapt to and mitigate the impacts of climate change including the more sustainable use of resources such as recycled and secondary aggregates, and the generation of renewable energy through energy from waste facilities which would reduce extraction of non-renewable resources. Mixed effects (minor positive/minor negative) are identified for SA objective 5 (Economy) as it seeks to optimise the contribution that mineral working makes to Herefordshire's economy which will require additional mineral extraction, however, it also seeks to ensure that benefits to the economy are balanced with the effective protection of places from adverse effects. A minor negative effect is identified for strategic objective 7 (Suitable Locations) as it seeks to identify suitable locations for mineral developments which will also encourage extraction of primary resources.

5.20 Strategic objective 11 (Climate Change) will have a significant positive effect on SA objectives **10: Climate Change** and **16: Pollution** as it seeks to address the causes and impacts of climate change relating to minerals and waste development activity thereby reducing air pollution from greenhouse gas emissions. Mixed effects (uncertain minor positive/uncertain minor negative or minor positive/uncertain minor negative or minor negative/minor positive) are expected for these SA objectives for strategic objectives 3

(Safeguarding), 5 (Economy), 6 (Supply of Minerals), 7 (Waste Management) and 9 (Suitable Locations) as identifying and safeguarding mineral and waste sites and their infrastructure will reduce the need to import minerals and reduce the transport distances of waste, thereby limiting greenhouse gas emissions. However, it is also possible that the operation of these developments may increase the proportion of waste and minerals transported by road resulting in increased emissions from lorries particularly HGVs. An uncertain minor negative effect is expected for strategic objective 3 (Safeguarding) in relation to SA objective **16: Pollution** as there may be negative effects associated with the operation of mineral and waste developments such as noise, light, odour and air pollution. Minor positive effects are identified in relation to SA objectives 10 and 16 for strategic objectives 1 (Health), 2 (Efficient Use of Resources), 4 (Waste Hierarchy) and 8 (Sustainable Transport) as the sustainable transport of minerals and waste will reduce greenhouse gas emissions, and the efficient use of use of minerals including using recycled and secondary aggregates will reduce road haulage activities if the recovered materials are sourced locally thereby reducing transport emissions.

5.21 Minor positive and uncertain minor positive effects are identified for SA objective **11: Restoration** for six strategic objectives: 1 (Health), 5 (Economy), 6 (Supply of Minerals), 10 (Design), 11 (Climate Change) and 12 (Environment) as they promote the safeguarding and delivery of mineral and waste developments that are supported by open space and green infrastructure which may be delivered as part of the restoration of sites.

5.22 Significant positive effects are expected for the environmental SA objectives **12: Biodiversity & Geodiversity, 13: Landscape, 14: Water, 15: Flooding** and **17: Soil** for strategic objective 12 (Environment) as it seeks to conserve and promote the natural environment by safeguarding the county's current stock of significant environmental assets from loss and damage whilst also reversing negative trends and encouraging expansion where possible. Mixed effects (either uncertain minor positive/uncertain minor negative or minor positive/uncertain minor negative) are expected in relation to these SA objectives for strategic objectives 3 (Safeguarding), 5 (Economy), 6 (Supply of Minerals), 7 (Waste Management) and 9 (Suitable Locations) with the exception of SA objectives **14: Water** and **16: Pollution** which will have uncertain minor negative effects due to strategic objective 9 (Suitable Locations) and SA objective **12: Biodiversity & Geodiversity** which will have a minor positive effect due to strategic objective 3 (Safeguarding). Safeguarding and identifying suitable locations for waste/mineral developments and ensuring an adequate supply of minerals and waste management infrastructure may have negative effects on the environment from the operation, scale, design and location of the developments. However, through safeguarding, geological formations may be preserved and in some instances created and it is also possible that the design of the developments or the restoration of sites may enhance the environment, for example, through the provision of green infrastructure which would benefit biodiversity, the landscape, and the water and soil environments.

5.23 Uncertain minor negative effects are identified for SA objective **14: Water** in relation to strategic objectives 3 (Safeguarding) and 5 (Supply of Minerals) as depending on the location, scale and design of the developments, there may be negative effects on the quality and quantity of water resources including groundwater aquifers from contamination, release of sediment, diversion of watercourses, or leachate break-out.

5.24 Minor positive effects in relation to SA objective 14 are identified for strategic objectives 1 (Health), 2 (Efficient Use of Minerals), 4 (Waste Hierarchy), 10 (Design) and 11 (Climate Change) as they support:

- the long-term conservation of primary minerals which will reduce the need for mineral extraction and thereby any associated impacts on the environment;
- the circular economy which will divert waste from landfills reducing adverse impacts on the quality of the landscape, and the soil/water environments;
- best practice operations which may include water pollution control measures, measures to minimise water usage, the provision of SuDS onsite, and the delivery of green infrastructure which can support biodiversity and, improve the landscape and quality/stability of soils;
- locating waste development on brownfield land (unlike mineral sites which must be worked where the resource lies);
- well-designed mineral and waste developments that use land efficiently and are supported by green infrastructure that will minimise landscape and visual intrusion of the developments, provide opportunities for enhancing biodiversity, and increase the area of permeable surfaces thereby reducing flood risk; and,
- developments that help to adapt to and mitigate the impacts of climate change which can include restoring former mineral and landfill sites thereby benefitting the landscape quality of Herefordshire and providing opportunities for water storage in flood zones.

5.25 Many effects are uncertain as it will depend on the scale, location and design of the developments which will not be known until planning application stage.

5.26 Negligible effects are expected for the remaining strategic objectives.

Changes in effects since Draft MWLP

5.27 There have been no changes in the effects identified for the Vision or Strategic Objectives since the Draft MWLP.

Chapter 5 – Strategic Policy and General Principles

5.28 **Table 5.3** summarises the SA effects for the four policies in Chapter 5: Strategic Policy and General Principles.

Table 5.3: Summary of SA effects for the policies in Chapter 5 Strategic Policy and General Principles

SA Objective	SP1: Resource Management	SP2: Access to Open Space and Recreation from Minerals and Waste Development	SP3: Transport within Sites	SP4: Site Reclamation
1: Employment	+	0	**0**	0
2: Sustainable Economy	+	0	0	0
3: Health	+	++	+	+?
4: Poverty and Equality	+	0	0	0
5: Sustainable Transport	+	+	++	+?
6: Historic Environment	+	+	+	+
7: Built Environment	+	+	+	+
8: Waste Hierarchy	++	0	0	0
9: Minerals Resources	++	0	0	0
10: Climate Change	++	0	+	0
11: Restoration	0	++	+	++
12: Biodiversity & Geodiversity	+	+	+	+
13: Landscape	+	++	+	+
14: Water	+	0	+	+
15: Flooding	0	+	+	+
16: Pollution	+	+	+	0
17: Soil	+	+	+?	++?

5.29 Significant positive effects are identified for policy *SP1: Resource Management* in relation to SA objectives **8: Waste Hierarchy, 9: Mineral Resources** and **10: Climate Change** as the policy directs minerals and waste resources to contribute positively to addressing climate change through promoting a circular economy which improves resource efficiency and the reuse of waste. Minor positive effects are identified for SA objectives **1: Employment, 2: Sustainable Economy** and **4: Poverty and Equality** as promoting a circular economy will generate investment and employment opportunities in the waste recycling industry. Further minor positive effects are identified for SA objectives **5: Sustainable Transport** and **16: Pollution** as promoting a circular economy and managing waste in accordance with the Waste Hierarchy will reduce energy use and the need to transport residual waste within and outside the county resulting in less transport-related emissions. Minor positive effects are also expected for the remaining SA objectives (with the exception of SA

objectives **11: Restoration** and **15: Flooding**) as the efficient use of mineral reserves and the transitioning to a more circular economy will reduce the rate of extraction of natural resources and any associated impacts on biodiversity, geodiversity, the landscape, the built and historic environments and, the soil and water environments.

5.30 Significant positive effects are expected for SA objective **11: Restoration** for policies *SP2: Access to Open Space and Recreation from Minerals and Waste Development* and *SP4: Site Reclamation* as they support the restoration of sites to a beneficial after-use and to a high standard which incorporate open spaces and green infrastructure. Minor positive effects are likely for SA objective **5: Sustainable Transport** as both policies provide opportunities to link to the existing rights of way network. Positive effects are also identified for SA objectives **3: Health** (significant positive for policy SP2), **6: Historic Environment, 7: Built Environment, 12: Biodiversity & Geodiversity, 13: Landscape** (significant positive for policy SP2), **15: Flooding** and **17: Soil** as they support high quality restoration and the incorporation of green infrastructure in developments which will have beneficial effects for the natural, historic and built environments as well as the health and amenity of communities. Policy SP4 will have a minor positive effect on SA objective **14: Water** as site reclamation can create areas of open water and watercourses which can aid site drainage. The provision of open spaces integrating green infrastructure as part of mineral workings and waste sites, will assist in improving local air quality and may act as buffers for noise pollution from the activities undertaken at the sites. Therefore, a minor positive effect is identified for policy SP2 for SA objective **16: Pollution**.

5.31 Policy *SP3: Transport within Sites* encourages the use of electric vehicles to transport minerals or waste within sites which will have a significant positive effect on SA objective 5**: Sustainable Transport**. Additional minor positive effects are identified for policy SP3 in relation to 11 SA objectives as the policy requires the transportation of materials or wastes within sites to minimise the potential for adverse effects on the natural, built and historic environments which will also help to reduce air pollution and, noise and dust emissions (SA objectives **3: Health, 6: Historic Environment, 7: Built Environment, 10: Restoration, 11: Climate Change, 12: Biodiversity & Geodiversity, 13: Landscape, 14: Water, 15, Flooding, 16: Pollution** and **17: Soil**).

5.32 Negligible effects are expected for the remaining policies in this chapter.

Changes in effects since Draft MWLP

5.33 There have been no changes in the effects identified for the Strategic Policies since the Draft MWLP.

Chapter 6 – Minerals

5.34 **Table 5.4** summarises the SA effects for the six policies in Chapter 6: Minerals.

Table 5.4: Summary of SA effects for the policies in Chapter 6 Minerals

SA Objective	Policy M1: Mineral Strategy	Policy M2: Safeguarding of Minerals Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effect	Policy M3: The Winning and Working of Sand and Gravel	Policy M4: The Winning and Working of Crushed Rock (Limestone)	Policy M5: The Winning and Working of Sandstone	Policy M6: Borrow Pits
1: Employment	+	+	+	+	+	+
2: Sustainable Economy	+	+	++	++	++?	+
3: Health	+/ ?	?	+?/ ?	+?/ ?	+?/ ?	+?
4: Poverty and Equality	+	+	+	+	+	+
5: Sustainable Transport	+/ ?	?	?/+?	?/+?	?/+?	+?
6: Historic Environment	+/ ?	?	+?/ ?	+?/ ?	+?/ ?	+?/ ?

SA Objective	Policy M1: Mineral Strategy	Policy M2: Safeguarding of Minerals Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effect	Policy M3: The Winning and Working of Sand and Gravel	Policy M4: The Winning and Working of Crushed Rock (Limestone)	Policy M5: The Winning and Working of Sandstone	Policy M6: Borrow Pits
7: Built Environment	+/ ?	?	+?/ ?	+?/ ?	+?/ ?	+?/ ?
8: Waste Hierarchy	+/	0	++?	+?	+?	+
9: Minerals Resources	++/	++?	++	++	++	++
10: Climate Change	+/ ?	?	?/+?	?/+?	?/+?	+?/ ?
11: Restoration	0	0	++?	++?	++?	++
12: Biodiversity & Geodiversity	+/ ?	?	+?/ ?	+?/ ?	+?/ ?	+?/ ?
13: Landscape	+/ ?	?	+?/ ?	+?/ ?	+?/ ?	+?/ ?
14: Water	+/ ?	?	+?/ ?	+?/ ?	+?/ ?	+?/ ?
15: Flooding	+/ ?	?	+?/ ?	+?/ ?	+?/ ?	+?/ ?
16: Pollution	+/ ?	?	?	?	?	+?
17: Soil	+/ ?	?	+?/ ?	+?/ ?	+?/ ?	?

5.35 Minor positive effects are identified for the majority of minerals policies in relation to SA objectives **1: Employment, 2: Sustainable Economy** and **4: Poverty and Equality** as they support the development and growth of the minerals economy, and the generation of employment opportunities in Herefordshire. Significant positive effects are identified for SA objective **2: Sustainable Economy** for policies *M3: Sand & Gravel, M4: Crushed Rock* and *M5: Sandstone*, as these policies will ensure a steady and adequate supply of minerals to meet the needs of society and will encourage long-term investment in Herefordshire's minerals sector.

5.36 Uncertain mixed effects (minor positive/minor negative) are identified for SA objective **3: Health** for policies *M1: Mineral Strategy*, *M3: Sand & Gravel, M4: Crushed Rock* and *M5: Sandstone*, as the working and winning of minerals may have an adverse effect on the amenity of local residents and communities as minerals development would result in some level of dust, noise, vibration, light pollution and an increase in traffic levels, although this is uncertain until the location, scale and design of the developments are known (an uncertain minor negative effect is also identified for *M2: Safeguarding Mineral Resources* for this reason). However, these policies also support identifying alternatives to primary reserves and the efficient use of secondary or recycled materials which would reduce the need for winning material at source and thus the associated effects on health. Furthermore, the restoration of mineral sites provides opportunities to deliver green infrastructure, enhanced public rights of way and improved access to recreation (an uncertain minor positive effect is also identified for *M6: Borrow Pits* for this reason).

5.37 Minor positive effects are expected for all policies in relation to SA objective **4: Poverty & Equality** as the operation of existing quarries and future extraction at specified locations will have a direct and indirect effect on increasing employment levels during site preparation, operation and restoration, as they are likely to result in job creation for local people which will help reduce employment deprivation in the county.

5.38 Uncertain negative effects are identified for the majority of mineral policies for SA objectives **5: Sustainable Transport** and **10: Climate Change** (with the exception of policy *M6: Borrow Pits*) as minerals development could contribute to road transportation and associated transport related emissions, and may not be located in proximity to

sustainable transport links. These effects are significant for policies *M3: Sand & Gravel*, *M4: Crushed Rock* and *M5: Sandstone* as these policies are likely to result in high levels of Heavy Goods Vehicles on local roads that have the potential to contribute to traffic and congestion. These negative effects are mixed with minor positive effects for policy *M1: Mineral Strategy* and with uncertain minor positive effects for policies M3, M4 and M5. Policy M1 requires minerals to be worked sustainably and for development to make efficient use of secondary or recycled materials, which would reduce the frequency of the transportation of raw materials to market, and (with regard to SA objective 10: Climate Change) the policy places restrictions on the extraction and use of hydrocarbon for energy. Policies M3, M4 and M5 could result in development that utilises sustainable transport links such as rail, for example the Moreton-on-Lugg railhead is used to transport minerals from Wellington Quarry. Uncertain minor positive effects are identified for policy M6 as it only permits the development of borrow pits on or adjacent to proposed construction projects, which will reduce the distance required to transport the materials. Further potential negative effects for policies M1, M3, M4, M5 and M6 are attributable to the release of carbon due to mineral extraction activities as soils and geological formations can store carbon in fairly inert forms.

5.39 Uncertain minor negative effects are expected for all minerals policies for SA objectives **6: Historic Environment**, **7: Built Environment**, **12: Biodiversity & Geodiversity**, **13: Landscape** and **14: Water** as mineral extraction could have an adverse impact on the historic environment, the character and built quality of settlements and neighbourhoods, the county's biodiversity and geodiversity, the character and quality of the landscape, and on watercourses. These effects are dependent on the location, scale and design of developments. These negative effects are mixed with minor positive effects for policy *M1: Mineral Strategy*, as the policy requires minerals to be worked sustainably and for development to make efficient use of secondary or recycled materials, which would reduce the need for new extraction sites. These negative effects are also mixed with uncertain minor positive effects for policies *M3: Sand & Gravel*, *M4: Crushed Rock*, *M5: Sandstone*, and *M6: Borrow Pits*, as site restoration, beneficial after uses, site location and the avoidance of adverse environmental impacts also have the potential to provide benefits to the natural, built and historic environments. Furthermore, sandstone (policy M5) is recognised for its importance in the continued preservation of local distinctiveness within Herefordshire, particularly features of local historic interest, listed buildings and archaeological sites.

5.40 The Screening Assessment in the HRA Report (LUC 2020) identified a lack of certainty as to whether the following policies would result in LSEs on European sites (i.e. the River Wye SAC and Wye Valley and Forest of Dean Bat Sites SAC:

- Policy *M3: The Winning and Working of Sand and Gravel* (River Wye SAC - physical damage and loss of habitat, non-physical disturbance, water quality and non-toxic contamination).
- Policy *M5: The Winning and Working of Building Stone (sandstone)* (River Wye SAC - water quality).

5.41 The HRA Report concluded that policies M3 and M5 would not give rise to adverse effects on the integrity of the River Wye SAC as a result of physical damage and loss of habitat, water quality and non-toxic contamination due to avoidance and mitigation measures already included within the Core Strategy and MWLP, and providing that the recommended mitigation measures outlined in the HRA Report are incorporated into the Publication Draft MWLP. The recommended mitigation measures include requiring site-specific HRA with detailed protected species surveys for site M05; project-level/site-specific HRA and targeted ecological surveys for proposals within Area of Search C; and, site-specific Ecological Mitigation Plans and dust assessments for minerals developments.

5.42 Minor positive effects are expected for the majority of minerals policies for SA objective **8: Waste Hierarchy** as policies could move the treatment of waste up the waste hierarchy. Policy *M6: Borrow Pits* promotes the infill of borrow pits with unusable materials from civil engineering construction projects. All mineral workings have the potential to treat CD&E waste and in many cases the same processing equipment may be shared. As such, uncertain minor positive effects are identified for policies *M4: Crushed Rock* and *M5: Sandstone*. Policy *M3: Sand & Gravel* is expected to have an uncertain significant positive effect as the allocated sites identified in the policy have the potential to treat CD&E waste but are also identified as appropriate locations for the disposal of inert waste which can be put to good use in the reclamation of former mineral workings. Minor positive effects are identified for policy *M1: Mineral Strategy* as the policy advocates that minerals should be worked sustainably through identifying sources of alternatives to primary reserves, and ensuring that new-build and refurbishment developments make efficient use of secondary or recycled materials, which should help to treat waste more as a valuable resource. However, this is mixed with a minor negative effect as the allocation of minerals sites encourages the extraction of new raw materials which would have an adverse effect on reducing waste. Policy *M2: Safeguarding Minerals* will not have a direct effect on this SA objective and a negligible effect is identified.

5.43 The majority of minerals policies are expected to have significant positive effects for SA objective **9: Mineral**

Resources as policy *M1: Mineral Strategy* requires minerals to be worked sustainably; policies *M2: Safeguarding Minerals*, *M3: Sand & Gravel*, *M4: Crushed Rock* and *M5: Sandstone* provide protection to mineral resources from inappropriate non-mineral development, and policy *M6: Borrow Pits* promotes the efficient use of mineral resources by supporting the infill of borrow pits with unusable materials from civil engineering construction projects. These effects are uncertain for policy M2 as the policy states that minerals located on land which is needed for strategic development may be lost where the need for non-minerals development is greater that the need for the mineral resource. Additionally, the positive effect identified for policy M1 is also mixed with a minor negative effect as the policy promotes the working of new mineral sites.

5.44 The majority of minerals policies are expected to have positive effects in relation to SA objective **11: Restoration** as they promote the effective restoration and appropriate after-use of sites. Significant positive effects are expected for policies *M3: Sand & Gravel*, *M4: Crushed Rock* and *M5: Sandstone*, as the NPPF (2019) states that mineral sites should be reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of minerals sites takes place; and, for policy *M6: Borrow Pits* as it directly supports the effective restoration and appropriate after-use of borrow pits. Effects are uncertain for policies M3, M4, and M5 as they are dependent on the type of restoration proposed and eventually developed on sites, and the scale, nature and location of the development proposed. Policies *M1: Mineral Strategy* and *M2: Safeguarding Minerals* will not have a direct effect on this SA objective and therefore negligible effects are identified.

5.45 Minor negative effects are expected for policies *M1: Mineral Strategy* and *M2: Safeguarding Minerals* for SA objective **15: Flooding**, as the working of mineral resources could have an adverse impact on flooding. These effects are uncertain, dependent on the location, scale and design of the development. Additionally, the minor negative effect identified for policy M1 is mixed with a minor positive effect, as the efficient use of land by working quarries in close proximity could reduce more widespread effects of flooding. Mixed effects (uncertain minor positive / uncertain minor negative) are expected for policies *M3: Sand & Gravel*, *M4: Crushed Rock* and *M5: Sandstone* as the continued operation of existing quarries and the future extraction at either specific sites, within the Preferred Areas of Search or at other areas of reserve could have an adverse impact on flooding, although this is uncertain until the location, scale and design of the developments are known. Although sand and gravel working is considered a 'water compatible' use and crushed rock and building rock working are considered 'less vulnerable' uses, this applies to the minerals working/processing itself and does not include the associated infrastructure/buildings required to support such developments. The SFRA outlines that the specific sites identified in these policies (M03, M04, M05, M07, M10, M13, M16 and M20) pass the Sequential Test and are appropriate for proposed development as set out in the MWLP, noting that a sequential approach may still need to be applied to steer development to areas at lowest flood risk. Where flood risks areas have been identified and the Exception Test is required, it is likely that this can be best managed through the appropriate location of more vulnerable development in areas at lower flood risk and, where required, there are feasible mitigation measures that can be implemented to manage these risks without increasing flood risk elsewhere. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and shallow infiltration and attenuated discharge to nearby watercourses. Mixed effects (uncertain minor positive / uncertain minor negative) are identified for policy *M6: Borrow Pits*, as borrow pits could be located off-site away from flood risk. The mixed effect is uncertain, dependent on the scale and location of development.

5.46 Uncertain minor negative effects are identified for the majority of the mineral policies for SA objective **16: Pollution** (with the exception of policy *M6: Borrow Pits*), as minerals developments could contribute to road transportation and associated transport related emissions, may not be located in proximity to sustainable transport links, and on-site preparation, operation and restoration would result in some level of noise, vibration and light pollution. The minor negative effect is mixed with an uncertain minor positive effect for policy *M1: Mineral Strategy*, as the policy requires minerals to be worked sustainably and for development to make efficient use of secondary or recycled materials, which would reduce the frequency of transportation of raw materials to market. Uncertain minor positive effects alone are identified for policy *M6: Borrow Pits*, as it only permits the development of borrow pits on or adjacent to proposed construction projects, which will reduce the distance required to transport the materials and associated transport-related emissions. Uncertainty attached to these effects is dependent upon development location, scale and design.

5.47 Uncertain minor negative effects are identified for all minerals policies in relation to SA objective **17: Soil** as mineral extraction activities can impact on soils through the removal of soil, contamination from leaching of chemical and oil spillages and leachate break-out. The minor negative effect is mixed with a minor positive effect for policy *M1: Mineral Strategy*, as this policy requires minerals to be worked sustainably and for development to make efficient use of secondary or recycled materials, which would reduce the need for raw material extraction and associated effects on soil quality. These negative effects are also mixed with uncertain minor positive effects for policies *M3: Sand & Gravel*, *M4:*

Crushed Rock, and *M5: Sandstone*, as site reclamation schemes have the potential to return sites to agricultural use. Uncertainty attached to these effects is dependent upon development location, scale and design.

Changes in effects since Draft MWLP

5.48 The sustainability effects in relation to SA objective 4: **Poverty and Equality** for policy *M5: The Winning and Working of Sandstone* has been revised from a mixed (minor positive and minor negative) but uncertain effect to a minor positive effect as the policy promotes development which will result in direct and indirect effects on increasing employment levels and job creation. The minor negative effect has been retrospectively removed as this was assigned in error during the SA of the Draft MWLP.

5.49 Mixed effects (uncertain minor positive/uncertain minor negative) rather than negligible effects are identified in relation to SA objective **15: Flooding** for policies M3, M4 and M5.

Chapter 7 – Waste

5.50 **Table 5.5** summarises the SA effects for the seven policies in Chapter 7: Waste.

Table 5.5: Summary of SA effects for the policies in Chapter 7: Waste

SA Objective	Policy W1: Waste Strategy	Policy W2: Solid Waste Management Requirements	Policy W3: Agricultural Waste Management	Policy W4: Wastewater Management	Policy W5: Preferred Locations for Solid Waste Treatment Facilities	Policy W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities	Policy W7: Waste Management Operations
1: Employment	+	+	0	+	+	+	+
2: Sustainable Economy	+	+	0	+	+	+	+?
3: Health	+?	+?/ ?	+	+	?	?	+?
4: Poverty and Equality	+	+	0	+	+	+	+
5: Sustainable Transport	+	+?/ ?	+	0	+/ ?	+/ ?	+
6: Historic Environment	+?	+?	0	0	?	?	+?
7: Built Environment	+?	+?	0	0	?	?	+?
8: Waste Hierarchy	++	++	+	+	++?	++?	++?
9: Minerals Resources	++	++	0	+	?	?	+
10: Climate Change	+	+?/ ?	+	+	+?/ ?	+?/ ?	+
11: Restoration	+?	+?	0	0	0?	++?	+?
12: Biodiversity & Geodiversity	+?	+?	+	+	?	?	+?
13: Landscape	+?	+?	+	0	?	?	+?
14: Water	+	0	++	++	?	+?/ ?	+
15: Flooding	+?	+?	0	0	?	?	+?
16: Pollution	+?	+?/ ?	+	+	?	?	+
17: Soil	+	+	+	0	?	?	+?

5.51 Positive effects are identified for the majority of the waste policies in relation to SA objectives **1: Employment**, **2: Sustainable Economy** and **4: Poverty and Equality** as they support the development and growth of the waste economy, and the generation of employment opportunities in Herefordshire. These effects are uncertain for policy *W7: Waste Management Operations* for SA objective 2: Sustainable Economy, as although the promotion of the development of waste management facilities through this policy will create investor confidence and thus encourage investors to develop new infrastructure, the strict requirements on the capabilities of new facilities could discourage investment where these have implications on development costs. Policy *W3: Agricultural Waste Management* will not have a direct effect on these SA objectives and therefore negligible effects have been identified.

5.52 Minor positive effects are identified for the majority of the waste policies in relation to SA objectives **3: Health** and **16: Pollution**. Policies *W1: Waste Strategy* and *W2: Solid Waste Management Requirements* promote a circular economy, diverting waste from landfill, and the recovery of materials from construction and demolition waste, which reduces raw mineral extraction and associated transport and transport-related emissions. Additionally, the positive effect is mixed with a minor negative effect for policy *W2: Solid Waste Management Requirements* as new waste facilities could result in additional transportation and transport-related emissions. Effects for both of these policies are uncertain, dependent on the size, design, type and location of new waste management infrastructure. Minor positive effects are also identified for policies *W3: Agricultural Waste Management* and *W4: Wastewater Management*, as these policies encourage the safe management of fertilisers and manures, support new infrastructure to supply potable water, and support the use of anaerobic digestion, which reduce fossil fuel use and associated emissions. The positive effect for these policies is reinforced by the policy requirement for wastewater works and works within livestock units contribute to achieving nutrient neutrality, or betterment, within the River Wye SAC. A minor positive effect is also identified for policy *W7: Waste Management Operations*, as it provides opportunities for the introduction of green infrastructure as part of site restoration and supports the development of waste management facilities for energy recovery. Effects for this policy in relation to SA objective 3: Health are however uncertain, dependent on the type of restoration proposed and eventually developed. Conversely, minor negative effects are expected for policies *W5: Preferred Locations for Solid Waste Treatment Facilities* and *W6: Preferred Locations Construction, Demolition and Excavation Waste Management Facilities*, as the preparation, operation and restoration of waste facilities have the potential to adversely affect the amenity of local residents and communities in terms of noise, vibration and light and air pollution. These effects are also uncertain, dependent on the scale, design and restoration of sites.

5.53 Minor positive effects are identified for the majority of waste policies for SA objective **5: Sustainable Transport** and for all policies for SA objective **10: Climate Change**. Policies *W1: Waste Strategy* and *W7: Waste Management Operations* promote a circular economy, which reduces raw mineral extraction and associated transport and transport-related emissions, and promote energy recovery, which reduces fossil fuel emissions. Policy *W3: Agricultural Waste Management* promotes the use of on-site anaerobic digestion for waste management and energy production, which reduces waste transportation and transport-related emissions, and reduces fossil fuel usage. Minor positive effects are also expected for policies *W2: Solid Waste Management Requirements*, *W5: Preferred Locations for Solid Waste Treatment Facilities* and *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities*, however these are mixed with minor negative effects. Mixed effects (uncertain minor positive and uncertain minor negative) are expected for policy W2, as although this policy supports the recovery of materials from construction and demolition waste, which reduces raw mineral extraction and associated transport and transport-related emissions, and supports the recovery of energy, which offsets emissions, the development of waste facilities could increase waste transportation and transport-related emissions. Similarly, mixed effects (minor positive and uncertain negative) are expected for policies W5 and W6 as the development of waste facilities may increase waste transportation. However, there may be opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries, and in the case of policy W6 there is also potential to treat CD&E waste and inert waste onsite, which will help to reduce the transport distances of waste. Although policy *W4: Wastewater Management* will not have a direct effect on SA objective 5: Sustainable Transport, and as such a negligible effect is identified, a minor positive effect is identified for this policy for SA objective 10: Climate Change, as it supports new infrastructure to manage water resources effectively, ensuring the impacts of climate change on water supply are carefully managed.

5.54 Policies *W1: Waste Strategy* and *W2: Solid Waste Management Requirements* are expected to have minor positive effects for SA objectives **6: Historic Environment**, **7: Built Environment**, **12: Biodiversity & Geodiversity**, **13: Landscape**, **15: Flooding** and **17: Soil**, as these policies promote a circular economy, diverting waste from landfill and the recovery of materials from construction and demolition waste, which reduces raw mineral extraction and associated effects on the historic environment; the character and built quality of settlements and neighbourhoods;

the county's biodiversity and geodiversity; the character and quality of the landscape; and, the water and soil environments. These effects are uncertain for SA objectives 6, 7, 12, 13 and 15, as they are dependent on the size, design and location of developments. Minor positive effects are also expected for policy *W7: Waste Management Operations* for these SA objectives, as the policy provides the opportunity for site restoration by means of landfill and supports waste developments that result in a local benefit and avoidance of adverse impacts. This could have positive effects on the natural, built and historic environments. These effects are uncertain, dependent on the type of restoration delivered and the benefits provided.

5.55 Policies *W5: Preferred Locations for Solid Waste Treatment Facilities* and *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* are expected to have minor negative effects for these SA objectives, as the operation and development of waste facilities may adversely impact the natural, built and historic environments. Effects for these two policies are uncertain, dependent on the location, scale and design of development and whether effects have already been addressed through conditions relating to the existing planning permission on operational sites. The SFRA outlines that the specific sites identified in this policies and the Strategic Employment Areas pass the Sequential Test and are appropriate for proposed development as set out in the MWLP, noting that a sequential approach may still need to be applied to steer development to areas at lowest flood risk. Where flood risks areas have been identified and the Exception Test is required, it is likely that this can be best managed through the appropriate location of more vulnerable development in areas at lower flood risk and, where required, there are feasible mitigation measures that can be implemented to manage these risks without increasing flood risk elsewhere. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and shallow infiltration and attenuated discharge to nearby watercourses.

5.56 Policy *W3: Agricultural Waste Management* will not have a direct impact on SA objectives 6, 7 and 15, and as such negligible effects have been identified. This policy is expected to have minor positive effects for SA objectives 12, 13 and 17, as it promotes the safe management of fertilisers and manures, promotes the use of anaerobic digestions, which reduces landfill use and provides natural mineral fertiliser, resulting in positive effects on the county's biodiversity and geodiversity, the character and quality of the landscape, and on soil quality. Policy *W4: Wastewater Management* will not have a direct impact on the majority of these SA objectives and as such negligible effects have been identified. Positive effects have been identified for this policy for SA objective 12, as the policy supports the provision of new infrastructure to support wastewater services, which has benefits for aquatic environments. The positive effects for policies W3 and W4 also relate to the requirement that any wastewater treatment works or works within livestock units on agricultural holdings must contribute to achieving nutrient neutrality, or betterment, within the River Wye SAC, which will also protect and improve aquatic habitats.

5.57 The HRA Report (LUC, 2020) identified a lack of certainty as to whether policy W6 would result in LSEs on European sites (LSEs on water quality are addressed below under SA objective 14: Water):

- W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities (River Wye SAC – physical loss of or damage to habitat, non-physical disturbance, non-toxic contamination).

5.58 The HRA Report concluded that policy *W6: Preferred Locations for Construction, Demolition and Excavation Management Facilities* would not give rise to adverse effects on the integrity of the River Wye SAC due to avoidance and mitigation measures already included within the Core Strategy and MWLP, and providing that the recommended mitigation measures outlined in the HRA Report are incorporated into the Publication Draft MWLP. The recommended mitigation measures include requiring a site-specific HRA for site W45 which contains detailed protected species surveys for otters; and, site-specific Ecological Mitigation Plans and dust assessments for waste developments.

5.59 Positive effects are expected for all the waste policies in relation to SA objective **8: Waste Hierarchy**, as policies could move the treatment of waste up the waste hierarchy. Policies *W3: Agricultural Waste Management* and *W4: Wastewater Management* supports the efficient management of agricultural waste and water. Significant positive effects are expected for policies *W1: Waste Strategy*, *W2: Solid Waste Management Requirements* and *W7: Waste Management Operations* as these policies promote a circular economy, the recovery of materials from construction and demolition waste and the development of waste management facilities for reuse, recycling, recovery and also site reclamation. The effects for policy W7 are however uncertain, as the policy also supports waste developments which do not necessarily meet all the requirements of the policy, and so effects are dependent on the developments that come forward and their ability to contribute to the waste circular economy. Significant positive effects are also identified for policies *W5: Preferred Locations for Solid Waste Treatment Facilities* and *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* as these support the operation and development of waste facilities that could

promote improved waste management processes and move waste management up the waste hierarchy. However, effects are uncertain as active sites may be used for different wastes or different technologies than are currently present.

5.60 Positive effects are expected for policies *W1: Waste Strategy* and *W7: Waste Management Operations* for SA objective **9: Mineral Resources** as these policies support the use of inert waste in the restoration of mineral workings, which could have a positive effect on managing and using waste mineral by-products. Additionally, significant positive effects are expected for policies *W1: Waste Strategy* and *W2: Solid Waste Management Requirements* as these policies promote the increased reuse of mineral resources, creating a market for recycled and secondary aggregate use. Minor positive effects are also expected for policy *W4: Wastewater Management* as it encourages the recovery of phosphorus for beneficial uses. Minor negative effects are expected for policies *W5: Preferred Locations for Solid Waste Treatment Facilities* and *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities*, as waste facilities may sterilise mineral resources and restrict the availability of resources in the county if located within a Preferred Area of Search or a Mineral Safeguarding Area. These effects are uncertain dependent on the location of development and whether effects have already been addressed through conditions relating to the existing planning permission on operational sites. Additionally, the development of new waste facilities at Strategic Employment Areas under policy W5 is not expected to adversely impact on mineral resources beyond the effects already experienced at operational industrial or employment sites. Policy *W3: Agricultural Waste* will not have a direct effect on this SA objective and as such negligible effects have been identified.

5.61 Positive effects are identified for the majority of waste policies in respect to SA objective **11: Restoration**. Policies *W1: Waste Strategy* and *W2: Solid Waste Management Requirements* are expected to have minor positive effects as they support the disposal of inert waste and use of inert waste in the restoration of mineral workings, but this is uncertain and dependent on the type of restoration developed. Policy *W7: Waste Management Operations* provides the opportunity for site restoration by means of landfill which could have a positive effect through restoration, but this is uncertain and dependent on the type of restoration developed. Significant positive effects are expected for policy *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* which allows for the sustainable recovery of CD&E waste at the Former Lugg Bridge Quarry, Strategic Employment Areas, and active mineral workings and the sustainable disposal of inert wastes at three of the operational quarries in Herefordshire, as the NPPF (2019) states that mineral sites should be reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of minerals sites takes place. This effect is also uncertain, dependent on the type of restoration developed. The restoration of waste developments other than landfill sites could be undertaken, however this is not promoted in the NPPG on Waste and would be dependent on when the waste facility ceased to operate which could be any number of years. Therefore, the waste facility locations identified in policy *W5: Preferred Locations for Solid Waste Treatment Facilities* are expected to have uncertain negligible effects on this SA objective. Policies *W3: Agricultural Waste Management* and *W4: Wastewater Management* will not have a direct effect on this SA objective and as such negligible effects have been identified.

5.62 Policies *W1: Waste Strategy* and *W7: Waste Management Operations* are expected to have minor positive effects in relation to SA objective **14: Water**, as these policies promote the circular economy which will increase efficient water use and support waste developments that avoid adverse impacts, such as upon water courses. The positive effect for policy W1 is reinforced by the policy's support for the provision of infrastructure necessary to recover phosphorous for beneficial purposes. This would divert phosphorous from water courses. Significant positive effects are expected for policies *W3: Agricultural Waste Management* and *W4: Wastewater Management* as they promote wastewater management, enabling the treatment and reuse of water, outline that works undertaken should contribute to achieving nutrient neutrality, or betterment, within the River Wye SAC, and that wherever practical, phosphorus should be recovered for beneficial uses which would improve the chemical and ecological status of the watercourses in the catchment.

5.63 The HRA Report (LUC, 2020) identified a lack of certainty as to whether the following policies would result in LSEs on water quality in the River Wye SAC:

- W3: Agricultural Waste Management;
- W4: Wastewater Management;
- W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities

5.64 Policy *W3: Agricultural Waste Management* could result in the development of anaerobic digestion facilities within agricultural holdings/units, which could result in phosphate inputs to the River Wye SAC, and policy *W4: Wastewater Management* could increase wastewater discharges from new or extended facilities which may have the potential to increase phosphate levels in the River Wye SAC. However, the HRA Report concluded that policies W3, W4 and W6 would not give rise to adverse effects on the integrity of the River Wye SAC as a result of changes in water quality due to the content of these policies and the Key

Development Criteria for each allocated site which includes specific reference to achieving nutrient neutrality or betterment, achieving reductions in phosphate releases and encouraging phosphate recovery for beneficial uses.

5.65 Conversely, policies *W5: Preferred Locations for Solid Waste Treatment Facilities* and *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* are expected to have minor negative effects, as waste facilities may adversely impact on water quality if located in proximity to designated or vulnerable waterbodies, or within Source Protection Zones, and waste facilities require water resource use that may adversely affect water supply. These effects are uncertain, dependent on the hydrological connectivity of sites with waterbodies and whether these are likely to have already been addressed through conditions relating to the existing planning permission of operational sites. Policy *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* is also identified as having uncertain minor positive effects as the supporting text requires hydrological impact assessments for the deposition of some waste. Additionally, the development of new waste facilities at Strategic Employment Areas under policy *W5: Preferred Locations for Solid Waste Treatment Facilities* is not expected to adversely impact on water beyond the effects already experienced at operational industrial or employment sites. Policy *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* is also identified as having uncertain minor positive effects as the supporting text requires hydrological impact assessments for the deposition of some waste, and that only clean, uncontaminated, inert materials should be deposited. Policy *W2: Solid Waste Management Requirements* will not have a direct effect on this SA objective and as such a negligible effect has been identified.

Changes in effects since Draft MWLP

5.66 The sustainability effects in relation to SA objective **14: Water** have changed for policies *W3: Agricultural Waste Management*, and *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities*. The effects have changed from minor positive to significant positive, and minor negative to mixed (minor positive and minor negative) effects, for policies W3 and W6, respectively. The effect for W3 changed due to amendments to the policy which requires all proposals to demonstrate the approach undertaken will contribute towards achieving nutrient neutrality, or betterment, within the River Wye SAC. This same text is included in Policy W4, however there has been no change in effect. The change in effect for policy W6 has arisen from the inclusion of supporting text, which states that only clean, uncontaminated, inert materials should be deposited and that a hydrological impact assessment is likely to be required.

5.67 The negligible effect for policy *W4: Wastewater Managemen*t in relation to SA objective 9: **Mineral Resources** has been revised to a minor positive due to the policy promoting the recovery of phosphorous.

5.68 The minor positive effect identified for policy *W7: Waste Management Operations* in relation to SA objective 11: **Restoration** has been revised to a minor positive but uncertain effect, to reflect the uncertainty around the type of restoration proposed. The uncertain minor positive effect identified for policy *W5: Preferred Locations for Solid Waste Treatment Facilities* is revised to an uncertain negligible effect as restoration of the types of waste facilities outlined in this policy is not promoted by the NPPG on Waste.

Chapter 6
Sustainability Appraisal Findings of the Publication Draft Herefordshire Minerals and Waste Local Plan

Introduction

6.1 This chapter considers the potential total sustainability effects of the Publication Draft Herefordshire Minerals and Waste Local Plan (2020). By looking at **Table 6.1** and **Table 6.2** which summarises all of the sustainability effects for the MWLP Vision; 12 strategic objectives; four strategic policies/general principles; six mineral-related policies; seven waste-related policies; 22 mineral and waste site allocations; four Areas of Search; and, nine Strategic Employment Areas, a judgement can be made regarding the potential effects of the Publication Draft MWLP on each SA objective.

6.2 In accordance with SEA Regulations, this chapter also presents an assessment of secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary effects.

SA Objective 1 - Support, maintain or enhance the provision of employment opportunities in the minerals and waste sectors

6.3 Positive effects are identified for all mineral and waste sites in relation to SA objective **1: Employment** as their allocation could have a direct effect on maintaining or increasing employment levels during site preparation, operation and restoration of mineral or waste sites. Minor positive effects are identified for 31 out of 35 site options as the majority of site proposals are unlikely to create a significant amount of new employment opportunities through their operation individually or cumulatively in the local area. Uncertain significant positive effects are expected for Strategic Employment Areas that are greater than 20ha in size (sites W58, W59, W63 and W66) as they are appropriate locations for larger scale/strategic waste management facilities which could generate numerous employment opportunities in Herefordshire.

6.4 The Vision, 12 strategic objectives, and 17 mineral and waste policies will also have minor positive effects for this SA objective as they support the generation of employment opportunities in the mineral and waste industries in Herefordshire. No significant positive effects are identified for any of the policies with regard to this SA objective.

6.5 No negative effects (minor or significant) were identified during the appraisal of sites and policies.

6.6 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **minor positive effect** on supporting, maintaining or enhancing the provision of employment opportunities in the minerals and waste sectors.

SA Objective 2 - Maintain or enhance conditions that enable a sustainable economy and continued investment

6.7 Minor positive effects are also expected for SA objective **2: Employment** for 31 sites as the development of waste treatment facilities will maintain/enhance conditions that enable a circular economy and long-term investment in the waste sector while the allocation of mineral sites for extraction will ensure a steady and adequate supply of minerals to meet the needs of society and will encourage long-term investment in Herefordshire's minerals sector. As for SA objective 1, uncertain significant positive effects are identified for sites W58, W59, W63 and W66 as these sites, due to their size (>20ha), may significantly enhance investment in the waste industry if large scale/strategic waste management facilities were developed at these locations.

6.8 The majority of policies are expected to have minor positive effects on supporting a sustainable economy and continued investment in the minerals and waste industries. However, strategic objectives 5 (Economy), 6 (Supply of Minerals) and 7 (Waste Management) will have significant positive effects as they seek to ensure there is a steady supply of minerals and the adequate provision of waste management infrastructure which will encourage investment in the minerals and waste industries. Further significant positive effects are expected for policies *M3: The Winning and Working of Sand and Gravel*, *M4: The Winning and Working of Crushed Rock (Limestone)* and *M5: The Winning and Working of Sandstone* as these policies seek to ensure a supply of various minerals throughout the plan period which will significantly support economic growth in the minerals sector.

6.9 No negative effects (minor or significant) were identified during the appraisal of sites and policies.

6.10 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **minor positive effect** on maintaining or enhancing conditions that enable a sustainable economy and continued investment.

SA Objective 3 - Protect and improve the health of the people of Herefordshire, and reduce disparities in health geographically and demographically

6.11 Of the 14 proposed minerals sites in the Publication Draft MWLP, four sites (M05, M07a, M07b and M10b) are expected to have uncertain significant negative effects in relation to SA objective **3: Health** as they are within 100m of one or more sensitive receptors. Most often, these receptors are nearby residential areas in settlements. Uncertain significant negative effects are also identified for the four Areas of Search as they contain numerous sensitive receptors. Site W07 is expected to have an uncertain significant negative effect in relation to this SA objective as it is within 100m of the settlement of Leominster and a waste water treatment works facility which could have a cumulative adverse effect on the amenity of the community. The effect is uncertain as this has potentially been addressed through conditions relating to the existing planning permission for the site. Site W45 is expected to have a mixed effect (uncertain minor positive/uncertain minor negative) as it is within 100m of residential areas in the settlements of Wellington and Moreton on Lugg where the disposal of inert waste during the restoration of the site may have adverse effects on the amenity of the nearby communities, however, this effect is judged to be minor rather than significant and likely to be experienced in the short-term. No significant positive effects were identified during the appraisal of the sites. The majority of the remaining sites including the Strategic Employment Areas are expected to have negligible effects.

6.12 Strategic objective 1 (Health) will have a significant positive effect on this SA objective as it directly supports minerals and waste development that make an appropriate contribution to improving health, well-being and quality of life of residents. Significant positive effects are also identified for policy *SP2: Access to Open Space and Recreation from Minerals and Waste Development* as it supports minerals and waste developments that optimise opportunities to improve public access to open spaces integrating green infrastructure as appropriate, which will benefit the health and amenity of local communities.

6.13 The majority of policies are expected to have minor positive effects as they support the long-term conservation and efficient use of minerals which may reduce adverse impacts on health and amenity incurred from the development of new mineral sites; the management of waste in accordance with the waste hierarchy and the use of alternatives to road transport which will reduce negative effects such as air and noise pollution; the delivery of green infrastructure as part of developments; and, the protection, conservation and enhancement of the county's natural, built, heritage and cultural assets which may improve health, wellbeing and quality of life. However, minor negative effects are expected in relation to five strategic objectives, five minerals policies and three waste policies (generally as part of mixed effects). These policies generally support mineral and waste developments which could have adverse effects on the amenity of local residents and communities depending on their proximity to extraction and waste sites, due to impacts such as greenhouse gas emissions, noise, vibration and light pollution during site preparation, operation and restoration. No significant negative effects were identified during the appraisal of policies.

6.14 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (minor positive/minor negative)** on protecting and improving the health of the people of Herefordshire, reducing disparities in health geographically and demographically.

SA Objective 4 - Reduce poverty and social inclusion by closing the gap between the most deprived areas in the county and the rest of the county

6.15 Encouraging investment in the minerals and waste industries has the potential to have a secondary impact on rates of deprivation through economic growth and job creation. All site allocations and the majority of policies are expected to have minor positive effects in relation to SA objective **4: Poverty and Equality**. Site W63 is expected to have an uncertain significant positive effect as it would provide employment opportunities at larger scale/strategic waste management facilities thereby reducing employment deprivation. Furthermore, it would provide employment opportunities in one of the most deprived areas of Herefordshire. No significant positive effects were identified for any of the policies with regard to this SA objective. No significant negative effects were identified during the appraisal of sites and policies.

6.16 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **minor positive effect** on reducing poverty and social inclusion by closing the gap between the most deprived areas in the county and the rest of the county

SA Objective 5 - Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county

6.17 Of the 14 proposed minerals sites in the Publication Draft MWLP, six sites are expected to have significant negative effects in respect to SA objective **5: Sustainable Transport** (M07a, M07b, M12, M13, M17 and M18) while eight sites are expected to have significant negative effects as part of overall mixed effects as these sites are either large (over 20ha) and are expected to generate high volumes of heavy goods vehicle traffic; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes; or, are not within 800m of any sustainable transport links which will encourage private car use among employees. The minor positive effects identified for eight sites recognises the proximity to one or two sustainable transport links which will encourage employees of the mineral sites to use sustainable transport; or the sites are within 1km of the Moreton-on-Lugg railhead which may be used to transport minerals using a more sustainable mode of transport than road-based travel. It is recognised that within all Areas of Search, there are areas which could be within 800m of numerous sustainable transport links thereby enabling sustainable travel by employees of minerals sites, leading to minor positive effects, however, there are also areas which could be more than 250m from a main road or more than 800m from a sustainable transport link, resulting in significant negative effects. Mixed effects (minor positive/minor negative) are identified for all waste site options. Uncertain minor positive effects are identified for all of the Strategic Employment Areas (sites W58-W66) as these may provide opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce transport distances of waste.

6.18 A significant positive effect is identified for strategic objective 8 (Sustainable Transport) for this SA objective as it seeks to reduce the need to travel and lessen the harmful impacts from traffic growth, promote the use of alternatives to road transport and ensure that new development is served by sustainable transport networks. A significant positive effect is expected for policy *SP3: Transport within Sites* as it encourages the use of electric vehicles to transport minerals or waste within sites and requires development proposals to design internal transport routes to provide cycle links or footpaths upon reclamation of the site (and earlier where practicable). Minor positive effects are expected for 11 policies and for 13 policies as part of mixed effects as they:

- support the development of waste management facilities for reuse, recycling, recovery and the overall transition to a more circular economy, which has benefits for reducing traffic associated with new raw material extraction;
- encourage symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce the transport distances of waste;
- promote the long-term conservation of primary minerals, and the efficient use of minerals in new development including using recycled and secondary aggregates which will reduce road haulage activities if the recovered materials are sourced locally, thereby reducing road congestion in the county; and,
- support safeguarding of transport infrastructure such as railheads which can facilitate the sustainable transport of minerals.

6.19 Significant negative effects (as part of mixed effects) are identified for policies *M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock,* and *M5: The Winning and Working of Sandstone* while minor negative effects are identified (mostly as part of mixed effects) for ten policies. The negative effects generally relate to minerals and waste continuing to be

predominately transported by heavy goods vehicles which will result in increases in traffic generation and transport-related emissions.

6.20 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (significant negative / minor positive)** on reducing road traffic, congestion and pollution, and promoting sustainable modes of transport and efficient movement patterns in the county.

SA Objective 6 - Value, protect and enhance the county's historic environment and cultural heritage

Uncertain significant negative effects are identified for the Areas of Search in relation to SA objective **6: Historic Environment** as these areas contain designated heritage assets that could be adversely affected by mineral extraction if development were to take place at sites either containing or adjacent to these assets or at sites that contribute to the setting of heritage assets. Uncertain minor negative effects are identified for all the mineral sites as adverse effects on buried archaeology in limestone, sandstone or sand and gravel deposits may be possible but are unlikely. No significant positive effects were identified during the appraisal of sites. Negligible effects are identified for all waste sites and Strategic Employment Areas, except for W45 which will have an uncertain minor positive effect as the restoration of the former quarry through the disposal of inert waste, may restore the local environment which contributes to the setting of nearby heritage assets, although this effect is uncertain.

6.21 Mostly minor positive or mixed effects (minor positive/minor negative) are identified for the policies, with the exception of strategic objective 12 (Environment) which will have a significant positive effect as it supports the protection, conservation and enhancement of historic assets. No significant negative effects were identified during the appraisal of policies.

6.22 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (minor positive/minor negative)** on valuing, protecting and enhancing the county's historic environment and cultural heritage.

SA Objective 7 - Value, protect and enhance the character and built quality of settlements and neighbourhoods

6.23 Uncertain significant negative effects are expected with regard to SA objective **7: Built Environment** for two mineral sites (M05 and M07a) and four waste sites (W05, W07, W10 and W19) as they are within close proximity (100m) of a settlement, and, as such, may have an adverse effect on the character of the area. Uncertain significant negative effects have also been identified in relation to all Areas of Search (A, B, C, and D), as each of these contains multiple settlements. It is uncertain where mineral extraction proposals will come forward, however, should they be within 100m of settlements, there is the potential for adverse effects on the character of the area. An uncertain minor positive effect is expected for site W45, as the restoration of the former quarry through the disposal of inert waste, could positively contribute to the character of nearby settlements Wellington and Moreton on Lugg. Negligible effects have been identified in relation to the 18 remaining sites and the nine Strategic Employment Areas. No significant positive effects were identified during the appraisal of sites.

6.24 Strategic objective 12 (Environment) is expected to have a significant positive effect on this SA objective as it seeks to conserve and promote the built environment by safeguarding the county's current stock of valued heritage and significant environmental assets from loss and damage, reversing negative trends, ensuring best condition and site betterment, as well as appropriately managing future assets. Minor positive or mixed effects (minor positive/minor negative) are identified for the majority of the policies. The positive effects primarily relate to promoting a circular economy which will reduce the need for extraction of raw minerals from sites within the county, which otherwise may adversely affect the character of settlements and neighbourhoods; the restoration of sites to open space and the incorporation of green infrastructure at developments which will contribute to the character of settlements; and, the use of building stone extracted from mineral sites in the county which will conserve and restore the built environment, thereby helping to maintain heritage assets (e.g. Listed Buildings) and a distinctive sense of place. Some uncertain minor negative effects are identified in relation to policy M2 and as part of mixed effects as mineral resources need to be worked where they occur which could have an adverse impact on the character of settlements. Similarly, there may be potential adverse impacts, notably in relation to policies W5 and W6, on the character of settlements from the development of new waste management facilities at industrial or Strategic Employment Areas.

6.25 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (minor positive/minor negative)** on valuing, protecting and enhancing the character and built quality of settlements and neighbourhoods.

SA Objective 8 - Move treatment of waste up the waste hierarchy

6.26 Uncertain significant positive effects are identified for waste site options W05, W07 and W10 in relation to SA objective **8: Waste Hierarchy** as they are operational household waste recycling centres which process waste that would otherwise be landfilled. Site W13 is operational and recovers construction, demolition and excavation waste which, if expanded, would have a significant positive effect on the recovery of waste. Mixed effects (uncertain significant positive/uncertain minor negative) are expected for W19 as

the site may provide energy recovery facilities, either biological (such as anaerobic digestion) which would have a significant positive effect or combustion with energy recovery (such as incineration or gasification) which would have a minor negative effect on driving waste up the waste hierarchy.

6.27 Minor negative effects have been identified for the mineral site options and waste sites W43, W44 and W45 as these are either identified in the Publication Draft MWLP as appropriate locations for the disposal of inert waste following extraction or have the potential to dispose of inert or landfill waste, which is judged to have negative effects in terms of moving the treatment of waste up the waste hierarchy. Uncertain minor negative effects are expected for the remaining mineral sites as they may dispose of inert or landfill waste, depending on the type of restoration proposed. Uncertain minor positive effects may be experienced for Strategic Employment Areas (sites W58-W66) as there may be opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which would encourage reuse and recycling of waste and contribute to the circular economy.

6.28 Significant positive effects are identified for the Vision, strategic objectives 4 (Waste Hierarchy), 5 (Economy) and 7 (Waste Management) as they promote the management of waste in accordance with the circular economy and the adequate provision of waste management infrastructure in Herefordshire.

6.29 A significant positive effect is identified for policy *SP1: Resource Management* as it promotes a circular economy which improves resource efficiency and the reuse of waste. Significant positive effects are expected for policies *W1: Waste Strategy*, *W2: Solid Waste Management Requirements*, and *W7: Waste Management Operations* as these policies promote a circular economy, diverting waste from landfill, the recovery of materials from construction and demolition waste and the development of waste management facilities for reuse, recycling, recovery and also site reclamation. Significant positive effects are also identified for policies *W5: Preferred Locations for Solid Waste Treatment Facilities* and *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* as they support the operation and development of waste facilities that could promote improved waste management processes and move waste management up the waste hierarchy. In addition, policy *M3: The Winning and Working of Sand and Gravel* is expected to have significant positive effects as the allocated sites within the policy are also identified in the MWLP as appropriate locations for the disposal of inert waste. The remaining policies are generally expected to have minor positive effects on this SA objective. No significant negative effects were identified during the appraisal of policies or sites.

6.30 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (significant positive/minor negative)** on moving treatment of waste up the waste hierarchy.

SA Objective 9 - Promote sustainable use of mineral resources

6.31 Minor positive effects are expected for all mineral site options and Areas of Search assessed with regard to SA objective **9: Mineral Resources** as the allocation of sites would provide a degree of protection to mineral resources from inappropriate non-mineral development, and would contribute to the supply of aggregates to meet the needs of society. Minor positive effects are also identified for sites W13, W43, W44 and W45 as these sites are either former quarries (W13) or involve inert waste disposal to restore quarries (W43, W44 and W45) which means that mineral resources at these sites would already have been extracted and could not be sterilised. Negligible effects are identified for sites W05, W07, W10 and W19 and for the Strategic Employment Areas.

6.32 The most significant positive effects are identified during the policy appraisals for this SA objective. Twelve significant positive effects are identified for the Vision and strategic objectives 2 (Efficient Use of Minerals), 3 (Safeguarding) and 4 (Waste Hierarchy) as they seek to safeguard mineral resources and promote resource efficiency which directly support the SA objective. A significant positive effect is identified for policy *SP1: Resource Management* as it promotes a circular economy which improves resource efficiency.

6.33 The majority of minerals policies are expected to have significant positive effects for this SA objective as policy *M1: Mineral Strategy* requires minerals to be worked sustainably; policies *M2: Safeguarding of Minerals Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effect*, *M3: The Winning and Working of Sand and Gravel*, *M4: The Winning and Working of Crushed Rock* and *M5: The Winning and Working of Sandstone* provide protection to mineral resources from inappropriate non-mineral development; and policy *M6: Borrow Pits* promotes the efficient use of mineral resources by supporting the infill of borrow pits with unusable materials from civil engineering construction projects. These effects are uncertain for policy *M2: Safeguarding of Minerals Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effect* as the policy states that minerals located on land which is needed for strategic development may be lost where the need for non-minerals development is greater that the need for the mineral resource. Additionally, the positive effect identified for policy *M1: Mineral Strategy* is also mixed with a minor negative effect as the policy promotes the working of new mineral sites. Additionally, significant positive effects are expected for policies *W1: Waste Strategy* and *W2: Solid Waste Management Requirements* as these policies promote the increased reuse of mineral resources, creating a market for recycled and secondary aggregate use.

6.34 The majority of remaining policies are expected to have either minor negative or negligible effects on this SA objective.

6.35 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **significant positive effect** on promoting the sustainable use of mineral resources.

SA Objective 10 - Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem

6.36 Of the 14 proposed minerals sites in the Publication Draft MWLP, six sites are expected to have significant negative effects in respect to SA objective **10: Climate Change** (M07a, M07b, M12, M13, M17 and M18) while eight sites are expected to have significant negative effects as part of overall mixed effects. These sites are either large (over 20ha) and are expected to generate high volumes of heavy goods vehicle traffic resulting in the production of high levels of CO_2 or other greenhouse gas emissions; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes; or, are not within 800m of any sustainable transport links which will encourage private car use among employees and increased transport emissions. The minor positive effects identified for eight sites recognises the proximity to one or two sustainable transport links which will encourage employees of the mineral sites to use sustainable transport thereby reducing transport emissions; or the sites are within 1km of the Moreton-on-Lugg railhead which may be used to transport minerals using a more sustainable mode of transport than road-based travel. It is recognised that within all Areas of Search, there are areas which could be within 800m of numerous sustainable transport links thereby enabling sustainable travel by employees of minerals sites, leading to minor positive effects, however, there are also areas which could be more than 250m from a main road or more than 800m from a sustainable transport link, resulting in significant negative effects. Mixed effects (minor positive/minor negative) are identified for all waste site options. Uncertain minor positive effects are identified for all of the Strategic Employment Areas (sites W58-W66) as these may provide opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce transport distances of waste and associated emissions.

6.37 A significant positive effect is identified for strategic objective 11 (Climate Change) for this SA objective as it seeks to address the causes and impacts of climate change relating to minerals and waste development activity thereby reducing air pollution from greenhouse gas emissions. Policy *SP1: Resource Management* will also have a significant positive effect as it directs minerals and waste resources to contribute positively to addressing climate change through promoting a circular economy and managing waste in accordance with the Waste Hierarchy will reduce energy use and greenhouse gas emissions associated with its transportation.

6.38 Minor positive effects are expected for ten policies and for 13 policies as part of mixed effects as they:

- support the development of waste management facilities for reuse, recycling, recovery and the overall transition to a more circular economy, which will reduce energy use and greenhouse gas emissions associated with the transportation of waste;
- encourage symbiotic relationships between waste management, engineering, manufacturing and research industries which will help to reduce the transport distances of waste;
- promote the long-term conservation of primary minerals, and the efficient use of minerals in new development including using recycled and secondary aggregates which will reduce the frequency of the transportation of raw materials to market, thereby reducing transport emissions;
- support safeguarding of transport infrastructure such as railheads which can facilitate the sustainable transport of minerals;
- support open space and green infrastructure provision which could also attenuate flooding thereby providing resilience to climate change;
- support the recovery of energy which enables the resultant heat and power to be used, thereby reducing emissions from fossil fuel electricity generation; and,
- restrict the extraction and use of coal for energy whereby the benefits will outweigh the impacts, including greenhouse gas emissions.

6.39 Significant negative effects (as part of mixed effects) are identified for policies *M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock,* and *M5: The Winning and Working of Sandstone* while minor negative effects are identified (mostly as part of mixed effects) for ten policies. The negative effects generally relate to minerals and waste continuing to be predominately transported by heavy goods vehicles which will result in increases in transport-related emissions or from the release of carbon due to mineral extraction activities as soils and geological formations can store carbon in fairly inert forms.

6.40 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (significant negative / minor positive)**

on reducing Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem.

SA Objective 11 - Promote effective restoration and appropriate after use of sites

6.41 Significant positive effects are expected for all mineral site options, and waste sites options W43, W44 and W45 with regard to SA objective **11: Restoration**, as the NPPF (2019) states that mineral sites should be reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of minerals sites takes place. These effects are uncertain dependent on the type of restoration proposed and eventually developed on sites, which will not be known until the planning application stage. The positive effects identified for sites M04, W44, Area of Search B and Area of Search D are combined with an uncertain minor negative effect as these sites are located within either the Shobdon Aerodrome Safeguarding Zone or Gloucestershire Safeguarding Zone and therefore have potential for adverse impacts on aircraft safety from bird-strike. The remaining waste sites and the Strategic Employment Areas are expected to have uncertain negligible effects on this SA objective as the restoration of waste developments other than landfill sites could be undertaken, however this is not promoted in the NPPG on Waste and would be dependent on when the waste facility ceased to operate which could be any number of years. . No significant negative effects were identified during the appraisal of sites.

6.42 Significant positive effects are expected for policies *SP2: Access to Open Space and Recreation from Minerals and Waste Development* and *SP4: Site Reclamation* as they support the restoration of sites to a beneficial after-use and to a high standard which incorporate open spaces and green infrastructure. Significant positive effects are also expected for mineral policies *M3: The Winning and Working of Sand and Gravel*, *M4: The Winning and Working of Crushed Rock* and *M5: The Winning and Working of Sandstone*, as the sites proposed for allocation in these policies will be restored to a high environmental standard, and for policy *M6: Borrow Pits* as it directly supports the effective restoration and appropriate after-use of borrow pits. Significant positive effects are expected for policy *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* as it supports restoration through the sustainable disposal of inert wastes at three of the operational quarries in Herefordshire. The majority of remaining policies will have minor positive effects on this SA objective. No negative effects (significant or minor) were identified during the appraisal of policies.

6.43 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **significant positive effect** on promoting effective restoration and appropriate after use of sites.

SA Objective 12 - Value, maintain, restore and expand county biodiversity and geodiversity

6.44 Sites M05, M20, W05 and W13 have all been identified as having uncertain significant negative effects with regard to SA objective **12: Biodiversity & Geodiversity** as they are located within 250m of either the River Wye SAC and/or the River Lugg SSSI. The SA assessment also identifies uncertain significant negative effects for site M13 as it is within 250m of the Black Mountains SSSI. An uncertain significant negative effect (as part of a mixed effect) is also identified for site W45 at Wellington Quarry as it is adjacent to the River Wye SAC and the River Lugg SSSI. Mixed effects (uncertain minor positive/uncertain significant negative) are identified for sites M10a and M10b as they either contain (as is the case for M10a) or are adjacent (as is the case for M10b) to the Perton Roadside Section Quarry SSSI. The negative effects are identified as these sites have the potential to affect biodiversity and geodiversity through habitat/geology damage/loss, fragmentation, and disturbance to species from noise, light, vibration and human presence. The uncertain minor positive effects are expected as extraction at M10a and M10b may expose more geological features at the SSSI making them visible and available for learning opportunities. The uncertain positive effect for site W45 is identified as the site is proposed for inert waste disposal following extraction which offers the potential to delivery biodiversity gains in the long term as restoration often involves the creation of species rich wetland or grassland habitats. Due to the extent of the Areas of Search, they all contain internationally, nationally or locally designated conservation sites and are therefore expected to have uncertain significant negative effects on this SA objective. The remaining sites are generally either expected to have uncertain minor negative or negligible effects on this SA objective.

6.45 The Screening Assessment in the HRA Report (LUC, 2020) also identifies for sites M05, M12, W45 and Area of Search C potential for significant effects on the River Wye SAC and potential for significant effects on the Wye Valley and Forest Dean Bat Sites SAC (for site M12 only) as a result of physical loss or damage to habitat/non-physical disturbance/non-toxic contamination (LSEs on water quality are addressed in SA objective 14: Water). The HRA concludes that adverse effects on the integrity of the River Wye SAC and Wye Valley and Forest of Dean Bat Sites SAC will be avoided, due to avoidance and mitigation measures already included within the Core Strategy and MWLP, and providing that the recommended mitigation measures outlined in the HRA Report are incorporated into the Publication Draft MWLP. The recommended mitigation measures include requiring site-specific HRA for sites M05/W45 including detailed protected species surveys for otter; project-level/site-specific HRA and targeted ecological surveys for proposals within Area of Search C; and, site-specific Ecological Mitigation Plans and dust assessments for minerals and waste developments. The

2018 HRA Screening Report recommendation in relation to site M12 has been incorporated in the Key Development Criteria in Appendix A of the MWLP for this site and therefore the HRA Report (LUC, 2020) concludes that adverse effects on the integrity of the Wye Valley and Forest of Dean Bat Sites SAC, as a result of damage and loss of off-site habitat, will be avoided.

6.46 The only significant positive effect identified in the policy appraisal is for strategic objective 12 (Environment) as it seeks to conserve and promote the natural environment by safeguarding the county's current stock of significant environmental assets from loss and damage, reversing negative trends, as well as appropriately managing future assets. Minor positive effects are expected for the majority of policies as they support site restoration, beneficial after uses, the incorporation of green infrastructure, and the avoidance of adverse environmental impacts. However, some minor negative effects are also identified as the extraction of minerals and the development of waste facilities could have adverse impacts through habitat/geology damage/loss, fragmentation, and disturbance to species.

6.47 The HRA Report (LUC, 2020) identified a lack of certainty as to whether the following policies would result in LSEs on European sites (LSEs on water quality are addressed in SA objective 14: Water):

- Policy *M3: The Winning and Working of Sand and Gravel* (River Wye SAC - physical damage and loss of habitat, non-physical disturbance, and non-toxic contamination).
- Policy *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* (River Wye SAC – physical loss of or damage to habitat, non-physical disturbance, non-toxic contamination).

6.48 The HRA concludes that adverse effects on the integrity of the River Wye SAC will be avoided, due to avoidance and mitigation measures already included within the Core Strategy and MWLP, and providing that the recommended mitigation measures outlined in the HRA Report are incorporated into the Publication Draft MWLP (outlined above).

6.49 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect **(minor negative/minor positive)** on valuing, maintaining, restoring and expanding county biodiversity and geodiversity.

SA Objective 13 - Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces

6.50 Uncertain significant negative effects are identified for Areas of Search C and D in relation to SA objective **13: Landscape** as they either contain part of the Wye Valley AONB, areas of open space, or areas identified as being of high sensitivity according to The Urban Fringe Sensitivity Analysis. The acceptability of any minerals extraction from these areas would need to be assessed against the minerals and other relevant policies of the MWLP. Uncertain minor negative effects are identified for Areas of Search A and B, and sites W05, W10 and W19 as these sites are located within Green Infrastructure Corridors and/or Enhancement Zones. Uncertain minor positive effects are expected for sites W43, W44 and W45 as the disposal of inert waste will restore the quality of the landscape at the former mineral sites. The remaining sites including the Strategic Employment Areas are expected to have negligible effects.

6.51 Strategic objective 12 (Environment) is expected to have a significant positive effect on this SA objective as it seeks to conserve and promote the natural environment, which is assumed to include the landscape, by safeguarding the county's current stock of environmental assets from loss and damage, reversing negative trends, ensuring best condition and site betterment, as well as appropriately managing future assets. A significant positive effect is also expected for policy *SP2: Access to Open Space and Recreation from Minerals and Waste Development* as it supports the protection and enhancement of green infrastructure and open space as part of mineral and waste developments. The majority of policies are expected to have minor positive effects in relation to this SA objective as they support the restoration of former quarries thereby restoring landscape character and quality; promote the delivery of well-designed minerals and waste developments that reinforce local distinctiveness and are supported by green infrastructure, which will minimise the landscape and visual intrusion of waste and mineral facilities; and, encourage the efficient use of mineral reserves and the transitioning to a more circular economy which will reduce the rate of extraction of natural resources, and any associated impacts on the landscape. Some uncertain minor negative effects are expected and generally relate to potential impacts on landscape character and quality from mining and quarrying as these sites need to be worked where the resource lies which may be within a protected or sensitive landscape. No significant negative effects were identified during the appraisal of policies.

6.52 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (minor positive/minor negative)** on valuing, protecting, enhancing and restoring the landscape quality of Herefordshire, including its rural areas and open spaces.

SA Objective 14 - Value, protect and enhance the quality of watercourses and maximise the efficient use of water

6.53 Five minerals sites (M04, M05, M13, M16 and M20) and five waste sites (W05, W07, W13, W44 and W45) are expected to have uncertain significant negative effects with regard to SA objective **14: Water** as they are either within 250m of rivers which have 'bad' or 'fail' ecological or chemical status, or are within 250m of a SSSI waterbody (bot apply for sites M05 and M20). The effects for sites W05 and W13 are uncertain as they have potentially been considered and addressed through existing planning conditions relating to the operational sites. The HRA Report (LUC, 2020) identifies that sites M05/W45 located at Wellington Quarry are adjacent to the River Wye SAC and share direct hydrological connectivity with the River Wye SAC, either through sharing boundaries or via field drains. However, as these allocations relate to the extraction of sand and gravel (M05) and the disposal of inert waste (W45 only) which is non-reactive both chemically and biologically, the potential for activities at these sites to result in changes in water quality, including through phosphate released from movement of soil, which would be considered significant is low.

6.54 An uncertain significant negative effect is also identified for site M20 as it is located 300m upslope from the River Wye SAC/SSSI and the western edge of the site is situated immediately adjacent to a brook at Merbach which flows directly into the River Wye SAC/SSSI while the western edge of site M12 is situated immediately adjacent to Mally Brook which discharges into the River Wye SAC approximately 3.7km downstream. As a result, run-off of chemicals, pollutants, sediment or contaminated water has the potential to result in LSEs on the SAC. However, as stated in the HRA Report, it is likely that this could be avoided with relative ease through a commitment to, and implementation of, appropriate mitigation safeguards including best practice working methods.

6.55 Uncertain significant negative effects are expected for Areas of Search A, B, C and D as they are either contain or are within 250m of rivers which have 'bad' or 'fail' ecological or chemical status, are within 250m of a SSSI waterbody, or intersect SPZ1. The effects for developing in the Areas of Search are also uncertain as the exact location of sites is unknown at present. Area of Search A includes the Ridgemoor Brook in the south-east, and an unnamed tributary in the north-west. Area of Search B includes the Pinsley Brook, Curl Brook and River Arrow, and Area of Search D includes Pentalow Brook. All of these watercourses have either 'moderate' or 'poor' ecological status, and all have a failing chemical status.

6.56 Within Area of Search C there is a Source Protection Zone (SPZ1) which provides protection for the head works around abstraction boreholes. Moreton Brook, also within the Area of Search, has a 'bad' ecological status, and is failing in terms of chemical status, which could be potentially affected further should it have connectivity with a future minerals site. Additionally, Wellington Brook and the River Lugg is within the Area of Search and have a poor and moderate ecological status, respectively and are both failing in terms of their chemical status. The River Lugg SSSI is within the Area of Search. There is, therefore, potential for future sites to fall within or close to these areas, leading to a significant negative effect.

6.57 An uncertain minor negative effect is identified for waste site (W19), as it is either within 250m of rivers which have 'poor' or 'moderate' ecological or chemical status, or is between 250m and 1km of a SSSI waterbody. Negligible effects are identified for the remaining ten sites and the nine Strategic Employment Areas. No significant positive effects were identified during the appraisal of sites.

6.58 A significant positive effect was identified for strategic objective 12 (Environment) as it seeks to conserve and promote the natural environment by safeguarding the county's current stock of significant environmental assets from loss and damage, reversing negative trends, ensuring best condition and site betterment, as well as appropriately managing future assets. Further significant positive effects were identified for policies *W3: Agricultural Waste Management and W4: Wastewater Management* as they promote wastewater management, enabling the treatment and reuse of water, outline that works undertaken should contribute to achieving nutrient neutrality, or betterment, within the River Wye SAC, and that wherever practical, phosphorus should be recovered for beneficial uses which would improve the chemical and ecological status of the watercourses in the catchment. The majority of policies are expected to have minor positive effects in relation to this SA objective as they promote the circular economy that will increase efficient water use and support waste and mineral developments that avoid adverse impacts, such as upon watercourses. Some uncertain minor negative effects are expected and generally relate to potential impacts on water quality if waste and mineral sites have hydrological connectivity with designated or vulnerable waterbodies, or within Source Protection Zones, or require water resource use that may adversely affect water supply.

6.59 The HRA Report (LUC, 2020) identified a lack of certainty as to whether the following policies would result in LSEs on water quality in the River Wye SAC:

- Policy *M3: The Winning and Working of Sand and Gravel*.
- Policy *M5: The Winning and Working of Building Stone (sandstone)*.
- Policy *W3: Agricultural Waste Management;*
- Policy *W4: Wastewater Management;*

- *Policy W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities*

6.60 The HRA Report concluded that policies W3, W4, W6, M3 and M5 would not give rise to adverse effects on the integrity of the River Wye SAC as a result of changes in water quality due to the content of these policies and the Key Development Criteria for each allocated site which includes specific reference to achieving nutrient neutrality or betterment, achieving reductions in phosphate releases and encouraging phosphate recovery for beneficial uses.

6.61 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (minor negative/minor positive)** on valuing, protecting and enhancing the quality of watercourses and maximise the efficient use of water.

SA Objective 15 - Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment

6.62 Mineral site M05, eight waste sites (W13, W45, W58, W60, W61, W62, W63, W64 and W66), and Areas of Search A-C are expected to have uncertain significant negative effects in relation to SA objective **15: Flooding** as they are within Flood Zones 2, 3a or 3b or are likely to increase flood risk elsewhere. Nine mineral site allocations (M03a, M03c, M04, M07a, M07b, M10a, M10b, M13, M16, M20) and seven waste sites (W05, W07, W19, W43, W44, W59 and W65) are identified as having uncertain minor negative effects as they are within Flood Zone 1 but are at risk from other sources of flooding (e.g. surface water flooding due to site topography). Negligible effects are expected for sites M12, M17, M18, W10 and Area of Search D as they are located within Flood Zone 1 and are not at risk from other sources of flooding. Uncertain minor positive effects are identified for sites W43, W44 and W45 (as part of overall mixed effects) as the restoration of sites through the disposal of inert waste will help to increase permeable land cover in the county which will contribute towards flood attenuation. No significant positive effects were identified during the appraisal of sites.

6.63 The SFRA states that all sites assessed in the SFRAs pass the Sequential Test and are appropriate for proposed development as set out in the MWLP, noting that a sequential approach may still need to be applied within sites to steer development to areas at lowest flood risk (sites M12, M17, M18 and the Areas of Search were not assessed). Where flood risk areas have been identified and the Exception Test is required, it is likely that this can be best managed through the appropriate location of more vulnerable development in areas at lower flood risk and, where required, there are feasible mitigation measures that can be implemented to manage these risks without increasing flood risk elsewhere. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and shallow infiltration and attenuated discharge to nearby watercourses. Nevertheless, in the absence of appropriate safeguards and mitigation measures outlined in the SFRA, the potential for the development of these sites to have a negative effect on this SA objective, cannot be excluded.

6.64 The only significant positive effect is identified for strategic objective 12 (Environment) as it seeks to conserve and promote the natural environment by safeguarding the county's current stock of significant environmental assets from loss and damage, reversing negative trends, ensuring best condition and site betterment, as well as appropriately managing future assets. Minor positive effects are generally recorded as restoring former mineral sites provides opportunities for water storage which can alleviate risks elsewhere and the protection/enhancement of green infrastructure can help to reduce adverse effects associated with flooding by providing increasing permeable land cover. Some uncertain minor negative effects (as part of mixed effects for 10 policies and standalone effects for three policies) are likely as mineral sources may naturally occur in areas of flooding, or new waste facilities at industrial or Strategic Employment Areas may be located within a Flood Zone 3 area. No significant negative effects were identified during the appraisal of policies.

6.65 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a mixed effect **(uncertain significant negative/minor positive)** on reducing the risk of flooding and the resulting detriment to public well-being, the economy and the environment.

SA Objective 16 - Minimise noise, light, and air pollution

6.66 Sites M05, W05, W07 and W10 are expected to result in uncertain significant negative effects in relation to SA objective **16: Pollution** as, whilst they are not within an AQMA, they are within 100m of settlements which could result in adverse effects on sensitive receptors. All four Areas of Search are considered to have potential to result in significant negative effects given that there are sensitive receptors including schools, settlements and churches within these areas. There is, therefore, potential for future sites to fall within or close to these areas, leading to a significant negative effect, however, given that the acceptability of any minerals extraction from these areas would need to be assessed against the minerals and other relevant policies of the MWLP, and also that the location of sites within the Areas of Search are unknown at present, the effects are uncertain. The remaining sites will have a negligible effect on this SA objective. No significant positive effects were identified during the appraisal of sites.

6.67 Strategic objective 11 (Climate Change) will have a significant positive effect on this SA objective as it supports mineral and waste developments that help adapt to and mitigate the impacts of climate change which will reduce air pollution from greenhouse gas emissions. Generally the policies will have minor positive effects (19 policies, six as part of mixed effects) as they seek to conserve primary minerals and promote the efficient use of mineral reserves which will reduce the rate of extraction of natural resources and any associated impacts such as dust, noise, light and air pollution, as well as reduced transport emissions; promote a circular economy and manage waste in accordance with the Waste Hierarchy which will reduce greenhouse gas emissions (for example from the transportation of waste and raw materials) thereby benefitting air quality; support the provision of open spaces integrating green infrastructure as part of mineral and waste sites, including trees and hedgerows, which will assist in improving local air quality and may act as buffers for noise pollution from the activities undertaken at sites; and, support waste management facilities for energy recovery which enable the resultant heat and power to be utilised, thereby reducing the need for fossil fuel usage and resultant emissions. Uncertain minor negative effects are also identified (usually as part of mixed effects) for 13 policies as these support the development of new waste facilities and the extraction of minerals which may result in some level of dust, noise, odour and air pollution. No significant negative effects were identified during the appraisal of policies.

6.68 Overall, the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (minor positive/minor negative)** on minimising noise, light, and air pollution.

SA Objective 17 - Value, protect and enhance soil quality and resources

6.69 Four mineral sites proposed in the Publication Draft MWLP are expected to have uncertain significant negative effects in relation to SA objective **17: Soil** as development on mainly (>50%) high quality Best & Most Versatile Agricultural Land (Grade 1, 2 and 3a) or on large areas of greenfield (>20ha) will result in that land being lost to other uses (M03a, M03c, M04, and M05). Uncertain significant negative effects are also identified for Areas of Search A, B and C as these areas comprise Grade 2 and Grade 3 Best and Most Versatile Agricultural Land. An uncertain significant negative effect is identified for site W10 as this site comprises entirely Grade 2 agricultural land.

6.70 Uncertain minor positive effects are identified for sites W43, W44 and W45 as these sites comprise mainly Grade 2 or 3a agricultural land. These sites are proposed as appropriate locations for the disposal of inert waste as part of the restoration of former mineral sites. Section 5 of The Town and Country Planning Act 1990 (as amended) requires mineral planning authorities to ensure that restoration meets the required standard (normally to the same physical characteristics as before). Therefore, positive effects are identified as restoration may safeguard the long-term potential of Best and Most Versatile Agricultural Land and other soil resources, however, the effects are uncertain, and dependent on the type of restoration proposed and eventually developed on the sites, which will not be known until the planning application stage. The remaining sites are either expected to have minor negative or negligible effects on this SA objective.

6.71 A significant positive effect is expected for strategic objective 12 (Environment) as it seeks to conserve and promote the natural environment by safeguarding the county's current stock of significant environmental assets from loss and damage whilst also reversing negative trends and encouraging expansion where possible. Policy *SP4: Site Reclamation* is also expected to have an uncertain significant positive effect as site reclamation schemes have the potential to return sites to agricultural use, thereby safeguarding the long-term potential of Best and Most Versatile Agricultural Land and conserving soil resources. No significant negative effects were identified during the appraisal of policies. The remaining policies are generally expected to have minor positive effects or mixed effects (minor positive/minor negative) on this SA objective.

6.72 As the majority of significant negative effects are in relation to mineral sites which will be mitigated through policy *SP4: Site Reclamation*, overall the Publication Draft Herefordshire Minerals and Waste Local Plan is therefore considered to have a **mixed effect (minor positive/minor negative)** on valuing, protecting and enhancing soil quality and resources.

Changes in effects since Draft MWLP

6.73 The SA of the Draft MWLP identified an uncertain minor positive effect in relation to SA objective **15: Flooding**, however this has been revised to a mixed effect (minor negative/minor positive) to take into account the detailed flooding assessments undertaken in the SFRA.

6.74 The SA of the Draft MWLP identified mixed effects (significant negative/minor positive) for SA objectives **12: Biodiversity and Geodiversity** and **14: Water**, however, these effects have been revised to mixed effects (minor negative/minor positive) to take into account the findings and recommendations of the HRA Report (LUC, 2020).

Table 6.1: Summary of SA effects for proposed site allocations in the Publication Draft MWLP

SA Objective	1: Employment	2: Sustainable Economy	3: Health	4: Poverty and Equality	5: Sustainable Transport	6: Historic Environment	7: Built Environment	8: Waste Hierarchy	9: Minerals Resources	10: Climate Change	11: Restoration	12: Biodiversity & Geodiversity	13: Landscape	14: Water	15: Flooding	16: Pollution	17: Soil
M03a	+	+	0	+?	+/	?	0		+	+/	++		0	0	0	0	?
M03c	+	+	0	+?	+/	?	0	?	+	+/	++?	?	0	0	0	0	?
M04	+	+	0	+?	+/	?	0		+	+/	++?/ ?	?	0	?	0	0	?
M05	+	+	?	+?	+/ ?	?	?		+	+/ ?	++?	?	0	?	0	?	?
M07a	+	+	?	+?	?	?	?	?	+	?	++?	?	0	0	0	0	?
M07b	+	+	?	+?		?	0	?	+		++?	?	0	0	0	0	?
M10a	+	+	?	+?	+/ ?	?	0	?	+	+/ ?	++?	+?/ ?	0	0	0	0	0
M10b	+	+	?	+?	+/	?	0	?	+	+/	++?	+?/ ?	0	0	0	0	0
M12	+	+	0	+?	?	?	0	?	+	?	++?	?	0	?	0	0	?
M13	+?	+	0	+?	?	?	0	?	+	?	++?	?	0	?	0	0	0
M16	+?	+	0	+?	+/ ?	?	0	?	+	+/ ?	++?	?	0	?	0	0	0
M17	+	+	0	+?	?	?	0	?	+	?	++?	?	0	0	0	0	0
M18	+	+	0	+?	?	?	0		+	?	++?	?	0	0	0	0	0
M20	+?	+	?	+?	+/ ?	?	0	?	+	+/ ?	++?	?	0	?	0	0	?
Area of Search Area A	+?	+	?	+?	+?/ ?	?	?	?	+	+?/ ?	++?	?	?	?	?	?	?
Area of Search Area B	+?	+	?	+?	+?/ ?	?	?	?	+	+?/ ?	++?/ ?	?	?	?	?	?	?
Area of Search Area C	+?	+	?	+?	+?/ ?	?	?	?	+	+?/ ?	++?	?	?	?	?	?	?

SA Objective	1: Employment	2: Sustainable Economy	3: Health	4: Poverty and Equality	5: Sustainable Transport	6: Historic Environment	7: Built Environment	8: Waste Hierarchy	9: Minerals Resources	10: Climate Change	11: Restoration	12: Biodiversity & Geodiversity	13: Landscape	14: Water	15: Flooding	16: Pollution	17: Soil
Area of Search Area D	+?	+	?	+?	+?/ ?	?	?	?	+	+?/ ?	++?/ ?	?	?	?	0	?	?
W05	+	+	?	+?	+/ ?	0	?	++?	0	+/ ?	+?	?	?	?	0	?	?
W07	+	+	?	+?	+/ ?	0	?	++?	0	+/ ?	+?	0?	0	?	0	?	0
W10	+	+	0	+?	+/ ?	0	?	++?	0	+/ ?	+?	?	?	0	0	?	?
W13	+	+	0	+?	+/ ?	0	0	++?	+	+/ ?	+?	?	0	?	0	0	?
W19	+	+	0	+?	+/	0?	?	++?/ ?	0	+/	+?	?	?	?	0	0	?
W43	+	+	0	+?	+/	0	0		+	+/	++?	+?	+?	0	+?	0	+?
W44	+	+	0	+?	+/	0	0		+	+/	++?/ ?	+?/ ?	+?	?	+?	0	+?
W45	+	+	+?/ ?	+?	+/	+?	+?		+	+/	++?	+?/ ?	+?	?	+?	?	+?
W58	++?	++?	0?	+?	+?	0?	0?	+?	0?	+?	+?	0?	0?	0?	0?	0?	0?
W59	++?	++?	0?	+?	+?	0?	0?	+?	0?	+?	+?	0?	0?	0?	0?	0?	0?
W60	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	+?	0?	0?	0?	0?	0?	0?
W61	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	+?	0?	0?	0?	0?	0?	0?
W62	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	+?	0?	0?	0?	0?	0?	0?
W63	++?	++?	0?	++?	+?	0?	0?	+?	0?	+?	+?	0?	0?	0?	0?	0?	0?
W64	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	+?	0?	0?	0?	0?	0?	0?
W65	+?	+?	0?	+?	+?	0?	0?	+?	0?	+?	+?	0?	0?	0?	0?	0?	0?
W66	++?	++?	0?	+?	+?	0?	0?	+?	0?	+?	+?	0?	0?	0?	0?	0?	0?

Table 6.2: Summary of SA effects for the policies in the Publication Draft MWLP

SA Objective	1: Employment	2: Sustainable Economy	3: Health	4: Poverty and Equality	5: Sustainable Transport	6: Historic Environment	7: Built Environment	8: Waste Hierarchy	9: Minerals Resources	10: Climate Change	11: Restoration	12: Biodiversity & Geodiversity	13: Landscape	14: Water	15: Flooding	16: Pollution	17: Soil
Vision	+	+	+	+	+/	+	+	++	++	+	+	+	+	+	+	+	+
SO1	0	0	++	0	+?	+	+	0	0	+?	+	+	+	+?	+?	+?	+
SO2	+	+	+	+	+	+	+	+	++	+	0	+	+	+	+	+	+
SO3	+	+	+?/ ?	+	+/	+/ ?	+/ ?	0	++	+/	0	+	+/ ?	?	+/ ?	?	+?/ ?
SO4	+	+	+	+	+	+	+	++	++	+	0	+	+	+	0	+	+
SO5	+	++	+/ ?	+	+/ ?	+/ ?	+/ ?	++	+/	+/ ?	+?	+?/ ?	+/ ?	+/ ?	+/ ?	+/ ?	+?/ ?
SO6	+	++	+?/ ?	+	+/ ?	+?/ ?	+?/ ?	0	+	+/ ?	+?	+?/ ?	+?/ ?	?	+?/ ?	+/ ?	+?/ ?
SO7	+	++	+?/ ?	+	+/ ?	+?	+?	++	+	+/ ?	0	+?/ ?	+?/ ?	+?/ ?	+?/ ?	+/ ?	+?/ ?
SO8	0	+	+?	0	++	+?	+?	0	0	+	0	+?	+?	0	0	+	0
SO9	+	+	+?/ ?	+	+?/ ?	+/ ?	+/ ?	+		+?/ ?	0	+/ ?	+/ ?	+/ ?	+/ ?	+?/ ?	+/ ?
SO10	0	0	+	0	0	+	+	0	0	0	+?	+	+	+	+	0	+
SO11	0	0	+	0	+?	+	+	+	+	++	+?	+	+	+	+	++	+
SO12	0	0	+	0	0	++	++	0	0	0	+?	++	++	++	++	0	++
SP1	+	+	+	+	+	+	+	++	++	++	0	+	+	+	0	+	+
SP2	0	0	++	0	+	+	+	0	0	0	++	+	++	0	+	+	+
SP3	**0**	0	+	0	++	+	+	0	0	+	+	+	+	+	+	+	+?
SP4	0	0	+?	0	+?	+	+	0	0	0	++	+	+	+	+	0	++?

SA Objective	1: Employment	2: Sustainable Economy	3: Health	4: Poverty and Equality	5: Sustainable Transport	6: Historic Environment	7: Built Environment	8: Waste Hierarchy	9: Minerals Resources	10: Climate Change	11: Restoration	12: Biodiversity & Geodiversity	13: Landscape	14: Water	15: Flooding	16: Pollution	17: Soil
M1	+	+	+/ ?	+	+/ ?	+/ ?	+/ ?	+/	++/	+/ ?	0	+/ ?	+/ ?	+/ ?	+/ ?	+/ ?	+/ ?
M2	+	+	?	+	?	?	?	0	++?	?	0	?	?	?	?	?	?
M3	+	++	+?/ ?	+	?/+?	+?/ ?	+?/ ?	++?	++	?/+?	++?	+?/ ?	+?/ ?	+?/ ?	0	?	+?/ ?
M4	+	++	+?/ ?	+	?/+?	+?/ ?	+?/ ?	+?	++	?/+?	++?	+?/ ?	+?/ ?	+?/ ?	0	?	+?/ ?
M5	+	++?	+?/ ?	+	?/+?	+?/ ?	+?/ ?	+?	++	?/+?	++?	+?/ ?	+?/ ?	+?/ ?	0	?	+?/ ?
M6	+	+	+?	+	+?	+?/ ?	+?/ ?	+	++	+?/ ?	++	+?/ ?	+?/ ?	+?/ ?	+?/ ?	+?	?
W1	+	+	+?	+	+	+?	+?	++	++	+	+?	+?	+?	+	+?	+?	+
W2	+	+	+?/ ?	+	+?/ ?	+?	+?	++	++	+?/ ?	+?	+?	+?	0	+?	+?/ ?	+
W3	**0**	0	+	0	+	0	0	+	0	+	0	+	+	++	0	+	+
W4	+	+	+	+	0	0	0	+	+	+	0	+	0	++	0	+	0
W5	+	+	?	+	+/ ?	?	?	++?	?	+?/ ?	+?	?	?	?	?	?	?
W6	+	+	?	+	+/ ?	?	?	++?	?	+?/ ?	++?	?	?	+?/ ?	?	?	?
W7	+	+?	+?	+	+	+?	+?	++?	+	+	+?	+?	+?	+	+?	+	+?

Duration of effects

6.75 The Publication Draft MWLP sets out how the future mineral and waste industries in Herefordshire should develop and operate covering the period up to 2041. Effects may be experienced in the short-term (defined for this SA as over the next five years), medium-term (defined as over the next 10 years), or long-term effects (defined as over the whole plan period). Given the generic nature of the policies in the Publication Draft MWLP, it is difficult to be precise about when, where and in what form the effects will arise, and how one effect might relate to another. However, it is possible to draw some broad conclusions about the nature and interrelationship of the effects that the SA has identified:

- Most of the effects will be long-term, in that the Publication Draft MWLP aims to provide minerals and waste treatment facilities that will last over time. There will be some temporary and short or medium term effects during site preparation, construction or operation of facilities (see below).
- The effects which have been identified in the appraisal of the Publication Draft MWLP, both positive and negative, are likely to increase over time, as the policies in the plan are implemented, and more mineral and waste developments are delivered in Herefordshire, although some operations may be completed as new sites are developed so some effects may balance out.

Short-term effects of the Publication Draft MWLP

6.76 The impacts of the Publication Draft MWLP in the short-term are mostly related to the initial impacts of commencing minerals extraction and the development of waste facilities. These will include the removal of vegetation, soil, and provision of infrastructure required. Such works could have negative impacts on biodiversity, health and wellbeing, amenity of local communities (possible disruption to rights of way, traffic flows, noise generation, vibration, dust etc.), soil quality, and the landscape. However, these impacts are temporary in nature and some may be minimised through good design, adherence to the policies in the Publication Draft MWLP or reversed through restoration measures in the medium to long-term.

Medium-term effects of the Publication Draft MWLP

6.77 Medium-term positive impacts relate to the employment and economic benefits of the waste and minerals sites. Negative impacts in the medium-term include the implications of operational minerals extraction sites and waste management facilities on health and wellbeing, and the amenity of local communities (e.g. noise, dust, odour, increased traffic etc.), and on landscape quality. However, these impacts should be avoided or mitigated through good practices by the minerals and waste operators, and adherence to the policies in the Publication Draft MWLP when planning proposals are assessed and determined by Herefordshire Council.

Long-term effects of the Publication Draft MWLP

6.78 Long-term, permanent benefits that would result from the Publication Draft MWLP include the provision of sufficient mineral and waste developments to meet Herefordshire's needs, potential flood alleviation, habitat creation and biodiversity enhancement, recreation enhancement opportunities through the restoration of former mineral sites, or the incorporation and preservation of important geological features within mineral sites. Long-term, permanent negative impacts of the Publication Draft MWLP are potentially: loss of habitats, areas of Best & Most Versatile Agricultural Land; climate change implications of the energy required to operate facilities and vehicle movements to and from mineral and waste sites; and, the disturbance and/or removal of archaeological remains. However, there may also be some long-term, permanent positive impacts for biodiversity and landscape through the creation of new habitats, and enhancement of landscape through well designed and implemented restoration of former mineral sites; and long term, permanent positive impacts for the historic environment as sites may benefit our understanding of the local archaeology which is found during minerals operations, and aggregates and building stone, for example, could also make a positive contribution towards local vernacular. Further long-term positive impacts may also include reduced consumption of resources and improvements, in terms of air quality and greenhouse gases, through co-locating waste facilities and reduced volumes of landfilled waste through recovery and recycling of waste.

Secondary, Cumulative and Synergistic Effects

6.79 Secondary (or indirect) effects are effects that are not a direct result of a policy or site allocation but occur away from the original effect or as a result of a complex pathway. Cumulative effects occur where two or more insignificant impacts combine to form a significant impact. Synergistic effects occur as the result of interactions between individual effects producing a total effect greater than the sum of each of the individual effects. Secondary, cumulative or synergistic effects may be either positive or negative.

6.80 The secondary, cumulative and synergistic effects of the policies and site allocations in the Publication Draft MWLP are summarised in the following paragraphs.

6.81 Encouraging investment in the minerals and waste industries has the potential to have a secondary impact on rates of deprivation through economic growth and job creation. Furthermore, the restoration of former mineral sites (Upper Lyde Quarry, Shobdon Quarry, Wellington Quarry, Leinthall Quarry, Perton Quarry, Callow Delve, Black Hill Delve, Llandraw Delve, Pennsylvani Delve, Sunnybank Delve and Westonhill Wood Delve) as required by NPPF (2019) would have secondary positive impacts on investment in the county and consequently employment opportunities in Herefordshire.

6.82 There is potential for cumulative, long-term adverse effects on the amenity of local communities where mineral workings, which tend to be clustered as adjacent permissions to be worked sequentially, are located (e.g. Upper Lyde Quarry, Wellington Quarry, Leinthall Quarry or Perton Quarry). Furthermore, sites which are within close proximity of a sensitive receptor and another mineral or waste site could also have a cumulative adverse effect on the amenity of the community, for example, site W07 is within 100m of residential areas and a waste water treatment works facility. Indirectly there may also be positive impacts on human health, wellbeing and amenity resulting from the creation of high-quality habitats and landscapes that contribute to a high quality of life for present and future generations where after-use schemes are publicly accessible. There could be potential for cumulative negative effects on local air quality when waste management facilities are combined with other facilities within existing industrial estates or Strategic Employment Areas. There could also be potential negative cumulative effects from noise at mineral sites that are in close proximity, for example, the currently operational sites at Wellington Quarry (M05) and Upper Lyde Quarry (M03) are within 1.7km of each other. Effects may be particularly experienced at the settlement of Moreton on Lugg.

6.83 Minerals extraction and waste treatment requires the transport of minerals and materials which will commonly be road based. Where waste road transport passes through urban areas it is likely to have a cumulative adverse effect on exacerbating congestion and air quality problems, particularly where new waste facilities may be located at Strategic Employment Areas W59, W60, W61, W62 and W63, as these are within close proximity to an AQMA. As the mineral sites are located in rural areas where traffic volumes are commonly low, the cumulative effects on the road network may be disproportionately large where sites are in close proximity due to the low capacity of rural roads. Furthermore, depending on the type of restoration proposed for sites, there may be secondary impacts from an increase in visitor numbers to an area which is likely to increase traffic volumes and transport emissions. Potential positive synergistic impacts may be experienced from the co-locating of waste facilities due to reduced waste transport distances and from the clustering of mineral sites as adjacent permissions to be worked sequentially which presents an opportunity to use the same equipment for processing of aggregate. The processes associated with the extraction of minerals and the treatment of waste may also have cumulative adverse effects on air quality and GHG emissions.

6.84 Safeguarding minerals from inappropriate development through policies *M2: Safeguarding of Minerals Resources and Associated Infrastructure from Sterilisation or Significant Adverse Effect*, *M3: The Winning and Working of Sand and Gravel*, *M4: The Winning and Working of Crushed Rock* and *M5: The Winning and Working of Sandstone* would reduce the need to import minerals from outside the county, which would have positive secondary impacts on achieving self-sufficiency as well as on congestion and greenhouse gas emissions. Although there is little or no secondary aggregate production in Herefordshire, the use of recycled aggregates will also have positive secondary benefits as it reduces demand for the extraction of primary minerals. Similarly, the allocation of new waste management infrastructure and the promotion of the reuse, recovery and recycling of waste through policies *W1: Waste Strategy*, *W2: Solid Waste Management Requirements*, *W5: Preferred Locations for Solid Waste Treatment Facilities*, *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* and *W7: Waste Management Operations* will also have positive secondary impacts on achieving self-reliance, reducing the need to identify sites for landfill (either within or outside of the county), and reducing greenhouse gas emissions from the transport of waste further afield for processing. Policies *W1: Waste Strategy*, *W3: Agricultural Waste Management* and *W7: Waste Management Operations* support proposals for anaerobic digestion and incineration with energy recovery which results in landfill avoidance and enables the resultant heat and power to be used, thereby

resulting in secondary positive effects on air quality through energy production that offsets/replaces consumption of fossil fuels but also secondary negative effects on air quality from the release of emissions from incineration.

6.85 Positive synergistic effects may be experienced in relation to the Strategic Employment Areas as there may be opportunities for symbiotic relationships between waste management, engineering, manufacturing and research industries which will contribute to the circular economy at a materials level.

6.86 Secondary positive effects may be experienced in the built and historic environments as the Publication Draft MWLP provides a mechanism to ensure that there is a steady and adequate supply of natural stone for the conservation and restoration of buildings, including designated historic buildings, which will help to maintain heritage assets and a distinctive sense of place.

6.87 Secondary positive effects may be experienced at mineral sites as extraction may expose more geological features making them visible and available for learning opportunities. Positive secondary impacts may be experienced as the restoration of mineral sites offers the potential to deliver biodiversity gains in the long term, however, many sites are restored to wetland and grassland habitats which can attract large numbers of species that may in certain circumstances pose a hazard to aircraft. There may be negative secondary impacts from the development of mineral sites within an Aerodrome Safeguarding Zone (i.e. M04, W44, Area of Search B and Area of Search D) as there is potential for adverse impacts on aircraft safety from bird-strike. The positive and negative secondary impacts will depend on the type of restoration proposed and eventually developed on the sites. There is also potential negative cumulative impacts from quarries that are clustered at the same location as these may have adverse effects on biodiversity through habitat fragmentation or species disturbance. Conversely, there may be potential for positive cumulative impacts resulting from habitat restoration schemes at these sites which may collectively improve habitat connectivity. Finally, although policies *SP2: Access to Open Space and Recreation from Minerals and Waste Development* and *SP4: Site Reclamation* seek to enhance and restore the landscape, they can also benefit biodiversity and the water and soil environments, even though this is not the primary purpose of these policies.

6.88 Mineral extraction is proposed at several sites in the same localities, for example at Upper Lyde Quarry, Leinthall Quarry and Perton Quarry. Phasing of sites should be considered to reduce cumulative adverse effects on the landscape, biodiversity and geodiversity, the water and soil environments, the historic environment, the road network, and the amenity of local communities. Works and restoration of existing sites should be completed prior to development starting on new sites to ensure no negative cumulative impacts are experienced.

6.89 There may be potential negative cumulative effects on flood risk and water resources through changing surface water drainage patterns and the loss of permeable surfaces to minerals extraction and waste developments, particularly where sites are located in proximity to each other. Following restoration, particularly at mineral sites clustered at the same location, there is potential for positive cumulative effects in relation to flood alleviation through the provision of additional flood storage.

6.90 The loss of agricultural land at site W10 and the potential temporary loss of Best & Most Agricultural Land at seven mineral sites, in addition to sites in three Areas of Search, would cumulatively add to the loss of agricultural land in the UK. However, the loss is considered to be small in relation to the overall agricultural land lost in the UK per annum to development.

Chapter 7
Mitigation and Recommendations

Mitigation and Recommendations

7.1 It is a requirement of the SEA Regulations that consideration is given to "the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme".

7.2 Proposals for minerals and waste development will be assessed not just in relation to the MWLP but also against all parts of the Development Plan. Under the Planning and Compulsory Purchase Act 2004, the Development Plan for proposals in Herefordshire comprises: the Core Strategy; the MWLP; and, other documents that comprise the Herefordshire Local Plan as relevant to the development proposed.

7.3 The following paragraphs identify the MWLP and Local Plan-Core Strategy policies that are expected to provide mitigation for the potential significant negative effects identified for the site allocations and other MWLP policies (in Chapters 4, 5 and 6). . Note that only those SA objectives for which potential significant negative effects were identified are addressed, therefore six of the SA objectives (SA objectives **1: Employment, 2: Sustainable Economy, 4: Poverty and Equality, 8: Waste Hierarchy, 9: Mineral Resources** and **11: Restoration**) are not included in **Table 7.1** as they are unlikely to be significantly negatively affected by the policies or site allocations in the Herefordshire Minerals and Waste Local Plan.

7.4 It is also noteworthy that some SA objectives, namely **6: Historic Environment** and **13: Landscape** are recording precautionary significant negative effects due to the constraints identified in the broad Areas of Search. These effects are uncertain as the specific location of future minerals sites in these areas will not be known until planning applications come forward.

7.5 Furthermore, beyond the mitigation provided in the MWLP and Herefordshire Core Strategy, minerals and waste developments will be subject to The Town and County Planning (Environmental Impact Assessment) Regulations 2017 which will identify likely significant effects (both alone and cumulatively) on the environment at a site-level. Mineral working and waste management will also require an Environmental Permit, the applications for which will include consideration of potential impacts from the operations of such developments. Water discharge activities, groundwater discharge activities and emissions of greenhouse gases, are permitted through the Environmental Permitting Regime. Dust and noise are subject to control under several statutes, including the Environment Protection Act 1990 and the Environment Act 1995.

7.6 The mitigation measures provided by policies in the Local Plan-Core Strategy and MWLP will be implemented at the planning application stage when further detail regarding the location, type and scale of waste facility and mineral extraction will be known. Mitigation may include planning conditions requiring: noise and dust impact assessments; air quality assessments; ecological assessments; hydrological/hydrogeological assessments; flood risk assessments; landscape and visual impact assessments; separation distances/buffer zones between the development and sensitive receptors; phasing of sites to minimise adverse effects on the environment and local communities; routeing agreements and/or travel plans to control and alleviate the effects of traffic movements; archaeological evaluation and watching briefs; or the incorporation of green infrastructure and high quality restoration of sites.

7.7 A number of recommendations were made in the previous SA of the Draft MWLP in terms of including additional policies which were broadly based around the supporting text included in the MWLP. However, it is now recognised that the MWLP policies and supporting text, including the Key Development Criteria for allocated sites in Appendix A, together with the Core Strategy policies generally provide sufficient mitigation to prevent, reduce and offset potential significant adverse effects. Some recommendations are still outlined where relevant.

7.8 Chapter 5: *Strategic Policy and General Principles* of the Publication Draft MWLP describes existing Core Strategy policies that are directly relevant to minerals and waste development, as well as proposing additional policies of a strategic nature applicable to minerals and waste development. Within this chapter the Publication Draft MWLP provides an explanation of how mineral and waste developments should seek to mitigate impacts on the natural,

built and historic environments, as well as on the health and amenity of communities.

SA Objective 3 - Protect and improve the health of the people of Herefordshire, reduce disparities in health geographically and demographically

7.9 Uncertain significant negative effects are identified for four mineral site allocations (M05, M07a, M07b and M10b), four Areas of Search and two waste site allocations (W07 and W45) as these are either within 100m of sensitive receptors or, in the case of the Areas of Search, contain sensitive receptors which could be adversely affected by noise, vibration, dust or light pollution. There is also potential for cumulative adverse effects from sites that are clustered at the same location (e.g. Wellington Quarry, Leinthall Quarry or Perton Quarry) or from sites that are near a sensitive receptor and another mineral or waste site (e.g. site W07). The following policies in the Core Strategy, policies and supporting text in the MWLP, and Key Development Criteria for the allocated sites provide mitigation for these effects on SA objective **3: Health**.

7.10 Policy *SD1: Sustainable Design and Energy Efficiency* of the Core Strategy applies to minerals and waste developments and requires planning proposals to safeguard residential amenity for existing and proposed residents; and to ensure that new development does not contribute to, or suffer from, adverse impacts arising from noise, light or air contamination, land instability or cause ground water pollution. Core Strategy policy *SS6: Environmental quality and local distinctiveness* requires proposals to consider their impact on local amenity, including light pollution, air quality and tranquillity.

7.11 Policy *SP2: Access to Open Space and Recreation from Minerals and Waste Development* in the Publication Draft MWLP supports the provision of outdoor facilities, such as Public Rights of Way, and the incorporation of green infrastructure which will contribute to the amenity and health of local communities.

7.12 For the description of Core Strategy policy *SS6: Environmental quality and local distinctiveness*, Chapter 5: *Strategic Policy and General Principles* of the Publication Draft MWLP provides an explanation of how mineral and waste developments should seek to mitigate impacts on local amenity, air quality and tranquillity. It states that all applications will be expected to incorporate robust measures to ensure that proposed developments do not cause unacceptable adverse impacts on either the environment or local communities, many of which can be overcome by implementing standard measures such as:

- limiting working hours;
- locating plant, machinery and haulage routes away from sensitive receptors;
- advanced tree planting;
- phasing so the development moves away from sensitive receptors;
- acoustic screening measures;
- enclosing plant and machinery;
- plant being fitted with silencers and white noise alarms;
- sheeting of lorries;
- cleaning of lorry wheels before they exit the site;
- good maintenance of bunds and stockpiles;
- avoiding or minimising the use of blasting explosives; and,
- careful design of external lighting to confine its influence to the point of use.

7.13 It also states that the Council expects planning applications to include a proportionate consideration of cumulative impacts. Appropriate measures to optimise benefits and to avoid or mitigate harm should be made clear within the planning application.

7.14 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate optimum phasing of the site, including how existing infrastructure will be used (to include at least site access and processing equipment) and reclamation at the earliest opportunity. A proliferation of ancillary infrastructure will not be permitted (sites M03a, M03c, M04, M05, M07a, M07b, M10a, M10b)
- Deliver priorities of the Herefordshire Green Infrastructure Strategy during operation and reclamation phases (all mineral sites, W13).
- Demonstrate the level of effect on residential amenity at nearby properties (M03a, M03c, M04, M18, M20, W44, W43).
- Demonstrate the level of effect on the amenity, health and safety and environment of nearby sensitive properties (schools, housing, medical facility, hotel, picnic site) (M05, W59, W60, W61, W62, W63, W64, W45).
- Footpaths crossing sites may require diversion or a non-working buffer such that the amenity value and connectivity of the footpaths are maintained (M05, W45).
- Demonstrate effect on air quality, particularly within the Hereford AQMA (W59, W61).

Recommendation:

The Key Development Criteria for sites M07b Leinthall Quarry and M10b Perton Quarry should be updated to 'demonstrate the level of effect on residential amenity at nearby properties' (i.e. at Leinthall Earls, Upper Dormington, Dormington).

7.15 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be **no residual significant negative effect** in relation to SA objective **3: Health.**

SA Objective 5 - Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county

7.16 Of the 14 minerals site allocations in the Publication Draft MWLP, six sites are expected to have significant negative effects in respect to SA objective **5: Sustainable Transport** (M07a, M07b, M12, M13, M17 and M18) while the remaining eight mineral sites and the four Areas of Search are expected to have significant negative effects as part of overall mixed effects, as these sites are either large (over 20ha) and are expected to generate high volumes of heavy goods vehicle traffic; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes; or, are not within 800m of any sustainable transport links which will encourage private car use among employees. Significant negative effects (as part of mixed effects) are also identified for policies *M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock and M5: The Winning and Working of Sandstone.* The negative effects generally relate to minerals and waste continuing to be predominantly transported by heavy goods vehicles which will result in increases in traffic generation and transport-related emissions. There may also be cumulative adverse effects on exacerbating congestion problems where waste road transport passes through urban areas, particularly where new waste facilities may be located at Strategic Employment Areas W59, W60, W61, W62 and W63, as these are within close proximity to an AQMA. As the mineral sites are located in rural areas where traffic volumes are commonly low, the cumulative effects may be disproportionately large where sites are in close proximity due to the low capacity of rural roads. Furthermore, depending on the type of restoration proposed for sites, there may be secondary impacts from an increase in visitor numbers to an area which is likely to increase traffic volumes. The following policies in the Core Strategy, policies and supporting text in the MWLP and Key Development Criteria for the allocated sites provide mitigation for these effects on SA objective **5: Sustainable Transport**.

7.17 Policy *SP3: Transport within Sites* in the Publication Draft MWLP requires applications for minerals and waste development to demonstrate the arrangements for the transport of minerals, waste or other materials within the site which minimise the potential for adverse impacts, including GHG emissions and optimises the opportunities for green infrastructure. It supports the use of electric powered vehicles as an alternative to the use of conveyors and/or pipelines required to move material within sites.

7.18 Core Strategy policy *SS4: Movement and Transportation* requires new developments to be designed and located to minimise the impacts on the transport network; ensuring that journey times and the efficient and safe operation of the network are not detrimentally impacted. Furthermore, where practicable, development proposals should be accessible by and facilitate a genuine choice of modes of travel, including walking, cycling and public transport.

7.19 Policy *MT1: Traffic Management, Highway Safety and Promoting Active Travel* of the Core Strategy requires development proposals to demonstrate that the strategic and local highway network can absorb the traffic impacts of the development without adversely affecting the safe and efficient flow of traffic on the network or that traffic impacts can be managed to acceptable levels to reduce and mitigate any adverse impacts from the development. It also encourages active travel; the protection of existing local and long-distance footways, cycleways and bridleways; and well-designed, safe layouts. Where traffic management measures are introduced, they should be designed to respect the character of the surrounding area including its landscape character.

7.20 Chapter 5: *Strategic Policy and General Principles* of the Publication Draft MWLP states that development proposals should consider the whole life of the site at the application stage which will enable a sustainable transport strategy to be put in place at the earliest opportunity. It supports the incorporation of green infrastructure into developments to offset carbon emissions caused by minerals and waste related traffic and the incorporation of cycle links or footpaths upon reclamation of the site. It also states that it may not always be possible to gain access directly to the strategic highway network from a site, but the proposed route should avoid local roads and settlements where feasible. Chapter 8: *Delivery, Implementation and Monitoring* states that, where necessary, routeing agreements and/or travel plans may be sought to control and alleviate the effects of traffic movements, for example in order to avoid environmentally sensitive places or local conditions of congestion on the highway network.

7.21 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate the level of effect on the road network and that vehicles can access and leave sites safely (M03a, M03c, M05, M12, M17, M13, M16, M20, W61, W43, W45).
- Implement a non-working buffer to ensure railway safety is maintained (M05, W45).
- Demonstrate the potential to use rail network for the transport of materials and that the proposal does not prevent future use of the rail infrastructure (W66).

Recommendation:

The Key Development Criteria for all sites (with the exception of those that are consented and operational) should be updated to 'demonstrate the level of effect on the road network and that vehicles can access and leave sites safely'.

7.22 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation there will be no residual significant negative effect in relation to SA objective 5: Sustainable Transport.

SA Objective 6 - Value, protect and enhance the county's historic environment and cultural heritage

7.23 Uncertain significant negative effects are identified for the Areas of Search in relation to SA objective **6: Historic Environment** as these areas contain designated heritage assets that could be adversely affected by mineral extraction if development were to take place at sites either containing or adjacent to these assets or at sites that contribute to the setting of heritage assets. The following policies in the Core Strategy, supporting text in the MWLP, and Key Development Criteria for the allocated sites provide mitigation for these effects on SA objective **6: Historic Environment**.

7.24 Planning applications for mineral extraction in the Areas of Search will be assessed against Core Strategy policy *LD4: Historic Environment and Heritage Assets* which requires development proposals to protect, conserve, and where possible enhance heritage assets and their settings; to record and advance the understanding of the significance of any heritage assets to be lost; and, where appropriate to improve the understanding of and public access to the heritage asset.

7.25 For the description of Core Strategy policy *LD4: Historic Environment and Heritage Assets*, Chapter 5: *Strategic Policy and General Principles* of the Publication Draft MWLP provides an explanation of how mineral and waste developments should seek to protect and enhance the historic environment. The Publication Draft MWLP states that mineral and waste development proposals should include a clear strategy for enhancing the historic environment. Site reclamation and after-use may enable improved access to historic sites, enhance the setting of historic features (such as water meadows), reinstate historic features such as hedgerows, or provide on-site interpretation of the site and its history in association with publicly accessible areas. It also states that wet working of mineral sites may not be a viable option where there are potential archaeological assets as this can significantly restrict the delivery of appropriate mitigation measures.

7.26 Policy *SS6: Environmental quality and local distinctiveness* of the Core Strategy also seeks to conserve and enhance historic environment and heritage assets, especially Scheduled Monuments and Listed Buildings.

7.27 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate the potential for archaeological remains in sites, through desk-based assessment and/or field evaluation. Mitigation will include recording, protection or recovery of any assets (M04, M03a, M03c, M05, M10a, M10b, M13, M20, W58, W62, W63, W64, W65, W66, W13, W19, W44, W43, W45).
- Demonstrate the level of effect on heritage assets and their settings (M05, M07a, M07b, M20, W60, W62, W63, W65, W66, W05, W45)

Recommendation:

The Key Development Criteria relating to the historic environment should be cross-checked with the SA findings for each site and updated accordingly.

7.28 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be no residual significant negative effect in relation to SA objective 6: Historic Environment.

SA Objective 7 - Value, protect and enhance the character and built quality of settlements and neighbourhoods

7.29 Uncertain significant negative effects are expected with regard to SA objective **7: Built Environment** for two mineral sites (M05 and M07a), four waste sites (W05, W07, W10 and W19) and all Areas of Search (A, B, C, and D) as they are within close proximity (100m) of a settlement, and, as such, may have an adverse effect on the character of an area. The following policy provides mitigation for these effects on SA objective **7: Built Environment**.

7.30 Core Strategy policy *SD1: Sustainable design and energy efficiency* requires new developments to be designed to

maintain local distinctiveness and to respect the scale, height, proportions and massing of surrounding development, whilst making a positive contribution to the character of an area.

7.31 Through the implementation of the above policy, there will be **no residual significant negative effect** in relation to SA objective **7: Built Environment**.

SA Objective 10 - Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem

7.32 Of the 14 minerals site allocations in the Publication Draft MWLP, six sites are expected to have significant negative effects in respect to SA objective **10: Climate Change** (M07a, M07b, M12, M13, M17 and M18) while the remaining eight mineral sites and the four Areas of Search are expected to have significant negative effects as part of overall mixed effects as these sites are either large (over 20ha) and are expected to generate high volumes of heavy goods vehicle traffic resulting in the production of high levels of CO_2 or other greenhouse gas emissions; are not within 250m of a main road thereby encouraging the use of local roads which may result in vehicles travelling slowly increasing the potential for traffic and pollutant deposition along those routes; or, are not within 800m of any sustainable transport links which will encourage private car use among employees and increased transport emissions. Depending on the location of the development, indirect greenhouse gas emissions may also arise as a consequence of development on high carbon soils. Significant negative effects (as part of mixed effects) are identified for policies *M3: The Winning and Working of Sand and Gravel, M4: The Winning and Working of Crushed Rock* and *M5: The Winning and Working of Sandstone.* The negative effects generally relate to minerals and waste continuing to be predominantly transported by heavy goods vehicles which will result in increases in transport-related emissions. The following policies in the Core Strategy, and policies and supporting text in the MWLP provide mitigation for these effects on SA objective **10: Climate Change**.

7.33 Policy *SP1: Resource Management* in the Publication Draft MWLP directs minerals and waste resources to contribute positively to addressing climate change through promoting a circular economy and managing waste in accordance with the Waste Hierarchy will reduce energy use and greenhouse gas emissions associated with its transportation.

7.34 Policy *SP3: Transport within Sites* in the Publication Draft MWLP requires applications for minerals and waste development to demonstrate the arrangements for the transport of minerals, waste or other materials within the site which minimise the potential for adverse impacts, including GHG emissions and optimises the opportunities for green infrastructure. It supports the use of electric powered vehicles as an alternative to the use of conveyors and/or pipelines required to move material within sites.

7.35 Policy *SP4: Site Reclamation* in the Publication Draft MWLP requires mineral sites and greenfield sites for waste use to be reclaimed, at the earliest opportunities, to a beneficial after-use. It supports proposals that deliver landscape scale benefits and green infrastructure appropriate to its location. Site reclamation may focus on flood storage which would alleviate risks of flooding elsewhere.

7.36 Core Strategy policy *SS7: Addressing climate change* requires development proposals to include measures which will mitigate their impact on climate change. At a strategic level, this will include designing developments to reduce carbon emissions and use resources more efficiently; focusing development to the most sustainable locations; promoting the use of decentralised and renewable or low carbon energy, where appropriate; and, protecting the best agricultural land, where possible. For the description of policy SS7, the Publication Draft MWLP states that reduced energy and water usage can be achieved through different ways, including good site design to reduce transport movements and circulating water within operations to reduce overall demand. Buildings and plant should be designed to reduce resource requirements and consequent carbon emissions, for example through the use of ultra-low emission vehicles (including non-fossil fuels and electric vehicles) and renewable energy supply (including solar panels, open-loop ground source or surface water source heating and cooling systems). Site reclamation also provides opportunities to address climate change by enabling the movement of wildlife and flood storage to alleviate risks elsewhere.

7.37 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Deliver priorities of the Herefordshire Green Infrastructure Strategy during operation and reclamation phases (all mineral sites, W13).
- Demonstrate effects on air quality, particularly within the Hereford AQMA (W59, W61).
- Demonstrate that the site will be safe in the event of a flood; risk is not increased on site or elsewhere; and where possible, flood risk is decreased. Flood alleviation should be considered in designing site reclamation (M04, W44, M05, W45, M12, M20, W59, W61, W62, W63, W64, W66, W13).
- Undertake a site-specific flood risk assessment to demonstrate compliance with a Local Development Order (W58).

Recommendation:

The Key Development Criteria for the allocated sites should be updated to reflect the key recommendations outlined in the Level 2 SFRA (2020).

7.38 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be **no residual significant negative effect** in relation to SA objective **10: Climate Change**.

SA Objective 12 - Value, maintain, restore and expand county biodiversity and geodiversity

7.39 Sites M05, M20, W05 and W13 have all been identified as having uncertain significant negative effects with regard to SA objective **12: Biodiversity & Geodiversity** as they are located within 250m of either the River Wye SAC and/or the River Lugg SSSI. The SA assessment also identifies uncertain significant negative effects for site M13 as it is within 250m of the Black Mountains SSSI. An uncertain significant negative effect (as part of a mixed effect) is also identified for site W45 at Wellington Quarry as it is adjacent to the River Wye SAC and the River Lugg SSSI. Mixed effects (uncertain minor positive/uncertain significant negative) are identified for sites M10a and M10b as they either contain (as is the case for M10a) or are adjacent (as is the case for M10b) to the Perton Roadside Section Quarry SSSI. The Screening Assessment in the HRA Report (LUC, 2020) also identifies for sites M05, M12, W45 and Area of Search C potential for significant effects on the River Wye SAC and potential for significant effects on the Wye Valley and Forest Dean Bat Sites SAC (for site M12 only) (LSEs on water quality are addressed in SA objective 14: Water).

7.40 Furthermore, the Screening Assessment in the HRA Report identified a lack of certainty as to whether the following policies would result in LSEs on European sites (LSEs on water quality are addressed in SA objective 14: Water):

- Policy *M3: The Winning and Working of Sand and Gravel* (River Wye SAC - physical damage and loss of habitat, non-physical disturbance, and non-toxic contamination).
- Policy *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities* (River Wye SAC – physical loss of or damage to habitat, non-physical disturbance, non-toxic contamination).

7.41 There may also be negative secondary impacts from the development of mineral sites within an Aerodrome Safeguarding Zone (i.e. M04, W44, Area of Search B and Area of Search D) as there is potential for adverse impacts on aircraft safety from bird-strike and potential negative cumulative impacts from quarries that are clustered at the same location as these may have adverse effects on biodiversity through habitat fragmentation or species disturbance. The following Core Strategy policies, policies and supporting text in the MWLP, Key Development Criteria for the allocated sites, and HRA Report recommendations, provide mitigation for these effects on SA objective **12: Biodiversity & Geodiversity**.

7.42 Policy *LD2: Biodiversity and geodiversity* of the Core Strategy requires development proposals to conserve, restore and enhance biodiversity and geodiversity assets, through the:

- retention and protection of nature conservation sites and habitats, and important species in accordance with their status as follows:
- development that is likely to harm sites and species of European Importance will not be permitted;
- development that would be liable to harm Sites of Special Scientific Interest or nationally protected species will only be permitted if the conservation status of their habitat or important physical features can be protected by conditions or other material considerations are sufficient to outweigh nature conservation considerations;
- development that would be liable to harm the nature conservation value of a site or species of local nature conservation interest will only be permitted if the importance of the development outweighs the local value of the site, habitat or physical feature that supports important species;
- development that will potentially reduce the coherence and effectiveness of the ecological network of sites will only be permitted where adequate compensatory measures are brought forward.
- restoration and enhancement of existing biodiversity and geodiversity features on site and connectivity to wider ecological networks; and,
- creation of new biodiversity features and wildlife habitats.

7.43 It also states that, where appropriate, the Council will work with developers to agree a management strategy to ensure the protection of, and prevention of adverse impacts on, biodiversity and geodiversity features.

7.44 For the description of Core Strategy policy *LD2: Biodiversity and geodiversity*, the Publication Draft MWLP states that the minerals and waste industries present significant opportunities to provide a net gain in biodiversity

and to improve the coherence and resilience of habitats and ecological networks, enabling wildlife to respond to a range of environmental pressures. Site reclamation will be expected to contribute at a landscape scale towards achieving nationally identified habitats of principal importance, taking account of the attributes of the site and of nearby areas, to support coherent and resilient networks of habitats that link the site with relevant ecological features in the wider landscape. Management strategies associated with a minerals or waste development may include a buffer within the development site to protect vulnerable features. Minerals and waste development proposals will also be expected to avoid unacceptable impacts on geodiversity value. Planning applications should demonstrate how the proposed development will deliver objectives of UK and Herefordshire Geodiversity Action Plans, such that geodiversity features are successfully incorporated with green infrastructure into reclamation and after-use, through measures such as:

- providing safe public access to geological features, whilst avoiding damage to them;
- involving geologists, geodiversity groups and museums in advising on, recording and sampling geodiversity;
- incorporating geodiversity considerations into site management plans to protect and maintain exposures;
- providing information to support understanding, interpretation and enjoyment of the features;
- creating links beyond the site boundary into the wider landscape.

7.45 Policy *SP4: Site Reclamation* in the Publication Draft MWLP requires mineral sites and greenfield sites for waste use to be reclaimed, at the earliest opportunities, to a beneficial after-use. The supporting text states that reclamations schemes should take account of the proximity and purpose of airfields and be designed accordingly. Chapter 5 of the MWLP provides further explanation of Core Strategy policy *SD1: Sustainable design and energy efficiency* stating that proposals for site working, restoration and after-use will be required to consider aviation safety in demonstrating the appropriateness of water management and site reclamation schemes.

7.46 The HRA Report (LUC, 2020) concludes that adverse effects on the integrity of the River Wye SAC and Wye Valley and Forest Dean Bat Sites SAC will be avoided, due to avoidance and mitigation measures already included within the Core Strategy and MWLP, and providing that the recommended mitigation measures outlined in the HRA Report are incorporated into the Publication Draft MWLP. The recommended mitigation measures include requiring site-specific HRA for sites M05/W45 including detailed protected species surveys for otter; project-level/site-specific HRA and targeted ecological surveys for proposals within Area of Search C; and, site-specific Ecological Mitigation Plans and dust assessments for minerals and waste developments.

7.47 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate the level of effect on geodiversity and incorporate mitigation measures as appropriate. Mitigation will include recording, protection or recovery of any assets (M04, M03, M05, M07, M10, M13, M20, W44, W43, W45)
- Design site to deliver a net gain in biodiversity and providing enhancement for priority bird species (M04, M03, M05, M07, M10, M12, M17, M18, M13, M16, M20, W58, W59, W60, W61, W62, W63, W64, W65, W66, W19, W10, W07, W05, W19, W44, W43, W45)
- Undertake an Appropriate Assessment to demonstrate likely significant effects on the River Wye SAC. Demonstrate nutrient neutrality or betterment in the River Wye SAC (M03, W43, M05, W45, M10, M12, M20, W58, W59, W60, W61, W62, W63, W65, W66, W19, W10, W05, W19)
- Demonstrate nutrient neutrality or betterment in the River Wye SAC (M04, W44)
- Demonstrate nutrient neutrality or betterment in the Wye Valley Woodlands SAC and Wye Valley & Forest of Dean Bat Sites SAC (M12)
- Demonstrate the level of effect on the River Lugg SSSI (M03, M05, M10, W62, W63, W05, W19, W43, W45) / River Teme SSSI and River Lugg (M07) / Caeiron Meadow SSSI and Pikes Farm Meadows SSSI (M17, M18) / Black Mountains SSSI (M13) River Wye SSSI (W58, M20)

Recommendation:

The policies and supporting text in the MWLP and Key Development Criteria for the allocated sites should be updated to reflect the key recommendations outlined in the HRA Report (2020). The Key Development Criteria relating to biodiversity and geodiversity should be cross-checked with the SA findings for each site and updated accordingly.

7.48 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be **no residual significant negative effect** in relation to SA objective **12: Biodiversity and Geodiversity**.

SA Objective 13 - Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces

7.49 Uncertain significant negative effects are identified for Areas of Search C and D in relation to SA objective **13: Landscape** as they either contain part of the Wye Valley AONB, areas of open space, or areas identified as being of high sensitivity according to The Urban Fringe Sensitivity Analysis. There are also potential cumulative adverse effects on landscape character and quality where several sites are proposed in the same locality. The following Core Strategy policies, policies and supporting text in the MWLP, and the Key Development Criteria for the allocated sites provide mitigation for these effects on SA objective **13: Landscape**.

7.50 Planning applications for mineral extraction in the Areas of Search will be assessed against Core Strategy policy *LD1: Landscape and townscape* which requires development proposals to conserve and enhance the natural, historic and scenic beauty of important landscapes and features, including Areas of Outstanding Natural Beauty, nationally and locally designated parks and gardens, and conservation areas. The policy also requires proposals to demonstrate that character of the landscape has positively influenced the design and scale of the development. Proposals should also incorporate new landscape schemes to ensure development integrates appropriately into its surroundings. For the description of policy LD1, the Publication Draft MWLP outlines a number of mitigation measures that could minimise impacts on the landscape from mineral and waste developments including:

- protecting, enhancing or creating views;
- interpretation boards at publicly accessible areas to enable greater understanding of the landscape, historic landscape character and influence of the underlying geology;
- designing waterbodies to be of a type, shape and scale that fits with the local landscape character and optimises biodiversity gains;
- protecting or re-instating historic landscape features such as hedgerows or woodland; and,
- ensuring any planting is appropriate to the landscape character, using locally present species to optimise biodiversity gains.

7.51 For the description of Core Strategy policy *SD1: Sustainable design and energy efficiency*, Chapter 5: *Strategic Policy and General Principles* of the Publication Draft MWLP states that the Council will expect proposals to incorporate best practice measures to minimise the effects of visual intrusion and care should be taken to ensure that screening measures are appropriate and are not, in themselves, a source of visual intrusion.

7.52 Other policies which planning applications will be assessed against include:

- Policy *LD3: Green Infrastructure* of the Core Strategy which requires development proposals to protect, manage and plan for the preservation of existing and delivery of new green infrastructure.
- Policy *SP4: Site Reclamation* of the Publication Draft MWLP which supports site reclamation schemes that deliver landscape scale benefits and/or integrated green infrastructure appropriate to its location.
- Policy *SP2: Access to Open Space and Recreation from Minerals and Waste Development* of the Publication Draft MWLP which supports the protection and enhancement of green infrastructure and open space as part of mineral and waste developments.

7.53 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Deliver priorities of the Herefordshire Green Infrastructure Strategy during operation and reclamation phases. Design sites to incorporate key features of the landscape character (all mineral sites, W13).
- Design sites to incorporate key features of the landscape character (all waste sites)
- Demonstrate the level of effect on the surrounding landscape (W62, W63, W64, W65, W66, W19, W10).

7.54 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, there will be **no residual significant negative effect** in relation to SA objective **13: Landscape.**

SA Objective 14 - Value, protect and enhance the quality of watercourses and maximise the efficient use of water

7.55 The SA identified uncertain significant negative effects for sites M04, M05, M13, M16, M20, W05, W07, W13, W44, W45 and all four Areas of Search. The Screening Assessment in the HRA Report (LUC, 2020) identified that, due to hydrological connectivity, LSEs for sites M05/W45, M20 and M12 on water quality at the River Wye SAC and Wye Valley and Forest Dean Bat Sites SAC, cannot be ruled out in the absence of appropriate safeguards and mitigation measures. The Screening Assessment in the HRA Report also identified a lack of certainty as to whether the following policies would result in LSEs on water quality in the River Wye SAC:

- Policy *M3: The Winning and Working of Sand and Gravel*.

- Policy *M5: The Winning and Working of Building Stone (sandstone).*
- Policy *W3: Agricultural Waste Management;*
- Policy *W4: Wastewater Management;*
- Policy *W6: Preferred Locations for Construction, Demolition and Excavation Waste Management Facilities*

7.56 There may also be potential negative cumulative effects on water resources through changing surface water drainage patterns, particularly where sites are located in proximity to each other. The following Core Strategy policies, policies and supporting text in the MWLP, Key Development Criteria for the allocated sites, and HRA Report recommendations, provide mitigation for these effects on SA objective **14: Water**.

7.57 Policy *SD3: Sustainable water management and water resources* of the Core Strategy requires development proposals to reduce flood risk; to avoid an adverse impact on water quality; to protect and enhance groundwater resources; and, to provide opportunities to enhance biodiversity, health and recreation.

7.58 For the description of Core Strategy policy *SD3: Sustainable water management and water resources*, the Publication Draft MWLP states that proposals for minerals extraction and waste management should ensure protection of water resources, particularly when river abstraction and/or groundwater sources may be affected. The potential for impact on water quantity, quality and flow should be assessed through hydrological and hydrogeological assessments to establish the base line position and ensure operations are appropriately designed, monitored and managed. The Council will seek to avoid:

- significant change to groundwater or surface water levels, for example, the process of 'dewatering' (when water is pumped out of a pit to allow dry working below the water table) must be carefully monitored, to ensure no adverse impacts on surrounding water availability; and,
- pollution of ground and surface water by chemicals and other contaminants, for example a considerable amount of water can be used when processing wastes or aggregates; drainage during site operations and any discharge to local watercourses, must be controlled to comply with standards set by the Environment Agency.

7.59 Policies *W3: Agricultural Waste Management and W4: Wastewater Management* promote wastewater management, enabling the treatment and reuse of water, outline that works undertaken should contribute to achieving nutrient neutrality, or betterment, within the River Wye SAC, and that wherever practical, phosphorus should be recovered for beneficial uses which would improve the chemical and ecological status of the watercourses in the catchment.

7.60 The HRA Report (LUC, 2020) concludes that adverse effects on the integrity of the River Wye SAC and Wye Valley and Forest Dean Bat Sites SAC will be avoided, due to avoidance and mitigation measures already included within the Core Strategy, the MWLP and Key Development Criteria for each allocated site which includes specific reference to achieving nutrient neutrality or betterment, achieving reductions in phosphate releases and encouraging phosphate recovery for beneficial uses.

7.61 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate any contamination on site will be identified and remediated, particularly with reference to protection of drinking water (W58, W19)
- Demonstrate how any pathways for contamination of the Source Protection Zones will be identified and avoided (W62, W63, W65)
- Demonstrate potential risks to the water environment as glaciofluvial sand and gravel deposits represent a secondary aquifer in hydraulic continuity with watercourses (M04, M03, M05, W44, W43, W45)
- Demonstrate potential risks to the water environment as site located within the hard rock of the Silurian Aymestry Limestone Formation / St. Maughans sandstone bedrock formation, classified as a secondary aquifer (M07, M10, M13, M16)
- Demonstrate potential risks to the water environment and private drinking water supply as site located within Brownstones formation, classified as a secondary aquifer and adjacent to a groundwater spring Source Protection Zone for public drinking water supply (M12)
- Demonstrate potential risks to the water environment and drinking water supply as site located within secondary aquifer of the Devonian (M20)
- Demonstrate the level of effect on water quality and hydrology in Pinsley Brook (M04, W44) / River Monnow (M13, M16) / Widemarsh Brook and Yazor Brook (W59, W60) / River Leadon (W64, W05) / Wellington Brook and Moreton Brook (W66, M05, W45) / Little Lugg River (W13) / River Lugg SSSI (M03, M05, M10, W62, W63, W05, W19, W43, W45) / River Teme SSSI and River Lugg (M07) / River Wye SSSI (W58, M20)
- Undertake an Appropriate Assessment to demonstrate likely significant effects on the River Wye SAC. Demonstrate nutrient neutrality or betterment in the River Wye SAC (M03, W43, M05, W45, M10, M12, M20,

W58, W59, W60, W61, W62, W63, W65, W66, W19, W10, W05, W19)

- Demonstrate nutrient neutrality or betterment in the River Wye SAC (M04, W44)
- Demonstrate nutrient neutrality or betterment in the Wye Valley Woodlands SAC and Wye Valley & Forest of Dean Bat Sites SAC (M12)

Recommendation:

The policies and supporting text in the MWLP and Key Development Criteria for the allocated sites should be updated to reflect the key recommendations outlined in the HRA Report (2020). The Key Development Criteria relating to the water environment should be cross-checked with the SA findings for each site and updated accordingly. The supporting text in Chapter 5 of the MWLP should be updated to refer to the protection of Source Protection Zones and designated waterbodies.

7.62 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be **no residual significant negative effect** in relation to SA objective **14: Water**.

SA Objective 15 - Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment

7.63 Mineral site M05, eight waste sites (W13, W45, W58, W60, W61, W62, W63, W64 and W66), and Areas of Search A-C are expected to have uncertain significant negative effects in relation to SA objective **15: Flooding** as they are within Flood Zones 2, 3a or 3b or are likely to increase flood risk elsewhere. The SFRA states that all sites assessed in the SFRAs pass the Sequential Test and are appropriate for proposed development as set out in the MWLP, noting that a sequential approach may still need to be applied within sites to steer development to areas at lowest flood risk (sites M12, M17, M18 and the Areas of Search were not assessed). Where flood risk areas have been identified and the Exception Test is required, it is likely that this can be best managed through the appropriate location of more vulnerable development in areas at lower flood risk and, where required, there are feasible mitigation measures that can be implemented to manage these risks without increasing flood risk elsewhere. The SFRA recommends mitigation measures including site-specific FRAs; detailed hydraulic modelling of nearby watercourses; and shallow infiltration and attenuated discharge to nearby watercourses. The following Core Strategy and MWLP policies provide mitigation for these effects on SA objective **15: Flooding**.

7.64 Policy *SP4: Site Reclamation* supports site reclamation schemes which have the potential to create wetland habitats, thereby providing flood storage.

7.65 Policy *SD3: Sustainable water management and water resources* requires development proposals to reduce flood risk; to avoid an adverse impact on water quality; to protect and enhance groundwater resources; and, to provide opportunities to enhance biodiversity, health and recreation. It also states that developments will be located in accordance with the Sequential Test and Exception Test (where appropriate).

7.66 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate that the site will be safe in the event of a flood; risk is not increased on site or elsewhere; and where possible, flood risk is decreased. Flood alleviation should be considered in designing site reclamation (M04, W44, M05, W45, M12, M20, W59, W61, W62, W63, W64, W66, W13).
- Undertake a site-specific flood risk assessment to demonstrate compliance with a Local Development Order (W58).

Recommendation:

The Key Development Criteria for the allocated sites should be updated to reflect the key recommendations outlined in the Level 2 SFRA (2020).

7.67 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be **no residual significant negative effect** in relation to SA objective **15: Flooding**.

SA Objective 16 - Minimise noise, light, and air pollution

7.68 Sites M05, W05, W07, W10 and W45 are expected to result in uncertain significant negative effects in relation to SA objective **16: Pollution** as, whilst they are not within an AQMA, they are within 100m of settlements which could result in adverse effects on sensitive receptors. All four Areas of Search are considered to have potential to result in significant negative effects given that there are sensitive receptors including schools, settlements and churches within these areas. There could be potential for cumulative negative effects on local air quality where waste management facilities are combined with other facilities within existing industrial estates or Strategic Employment Areas or potential negative cumulative effects from noise at mineral sites that are in close proximity. The following Core Strategy policies, supporting text in the MWLP, and Key Development Criteria for the allocated

sites provide mitigation for these effects on SA objective **16: Pollution**.

7.69 Policy *SD1: Sustainable design and energy efficiency* of the Core Strategy applies to minerals and waste developments and requires planning proposals to ensure that new development does not contribute to, or suffer from, adverse impacts arising from noise, light or air contamination. Core Strategy policy *SS6: Environmental quality and local distinctiveness* requires proposals to consider their impact on residential and local amenity, including light pollution and air quality.

7.70 For the description of Core Strategy policy *SS6: Environmental quality and local distinctiveness*, Chapter 5: *Strategic Policy and General Principles* of the Publication Draft MWLP provides an explanation of how mineral and waste developments should seek to mitigate impacts on local amenity, air quality and tranquillity. It states that all applications will be expected to incorporate robust measures to ensure that proposed developments do not cause unacceptable adverse impacts on either the environment or local communities, many of which can be overcome by implementing standard measures such as:

- limiting working hours;
- locating plant, machinery and haulage routes away from sensitive receptors;
- advanced tree planting;
- phasing so the development moves away from sensitive receptors;
- acoustic screening measures;
- enclosing plant and machinery;
- plant being fitted with silencers and white noise alarms;
- sheeting of lorries;
- cleaning of lorry wheels before they exit the site;
- good maintenance of bunds and stockpiles;
- avoiding or minimising the use of blasting explosives; and,
- careful design of external lighting to confine its influence to the point of use.

7.71 It also states that the Council expects planning applications to include a proportionate consideration of cumulative impacts. Appropriate measures to optimise benefits and to avoid or mitigate harm should be made clear within the planning application.

7.72 The Key Development Criteria for the allocated sites in the Publication Draft MWLP require applications to:

- Demonstrate that lighting will be kept to the minimum required to ensure safe working conditions on site (M07, M10, M12, M17, M18, M13, M16, M20)
- Demonstrate the level of effect on residential amenity at nearby properties (M03, M04, M18, M20, W44, W43).
- Demonstrate the level of effect on the amenity, health and safety and environment of nearby sensitive properties (schools, housing, medical facility, hotel, picnic site) (M05, W59, W60, W61, W62, W63, W64, W45).
- Demonstrate effect on air quality, particularly within the Hereford AQMA (W59, W61).

Recommendation:

The Key Development Criteria for sites M07b Leinthall Quarry and M10b Perton Quarry should be updated to 'demonstrate the level of effect on residential amenity at nearby properties' (i.e. at Leinthall Earls, Upper Dormington, Dormington).

The Key Development Criteria for sites M03, M04 and M05 should be updated to 'demonstrate that lighting will be kept to the minimum required to ensure safe working conditions on site'.

7.73 Through the implementation of the above policies, the supporting text in the MWLP, the Key Development Criteria for the allocated sites, and the above recommendation, there will be **no residual significant negative effect** in relation to SA objective **16: Pollution.**

SA Objective 17 - Value, protect and enhance soil quality and resources

7.74 Four mineral sites proposed in the Publication Draft MWLP are expected to have uncertain significant negative effects in relation to SA objective **17: Soil** as development on mainly (>50%) high quality Best and Most Versatile Agricultural Land (Grade 1, 2 and 3a) or on large areas of greenfield (>20ha) will result in that land being lost to other uses (M03a, M03c, M04 and M0). Uncertain significant negative effects are identified for Areas of Search A, B and C as these areas comprise Grade 2 and Grade 3 Best and Most Versatile Agricultural Land. An uncertain significant negative effect is identified for site W10 as this site comprises entirely Grade 2 agricultural land. There may also be potential negative cumulative effects on the soil environment from the loss of Best and Most Versatile Agricultural Land to minerals extraction and waste developments. The following Core Strategy policies, and policies and supporting text in the MWLP provide mitigation for these effects on SA objective **17: Soil**.

7.75 Policy *SP4: Site Reclamation* in the Publication Draft MWLP supports site reclamation schemes which have the potential to return sites to agricultural use, thereby safeguarding the long-term potential of Best and Most Versatile Agricultural Land and conserving soil resources.

7.76 Policy *SS7: Addressing climate change* of the Core Strategy supports the protection of best agricultural land, where possible. The supporting text states that *"areas of lower quality agricultural land will be utilised in preference to the best and most versatile agricultural land, in accordance with the National Planning Policy Framework (Para 112), where possible"* (p.44).

7.77 For the description of Core Strategy policy *LD2: Biodiversity and geodiversity*, Chapter 5: *Strategic Policy and General Principles* of the Publication Draft MWLP provides an explanation of how mineral and waste developments should protect and conserve soil resources. According to the Publication Draft MWLP, planning applications should consider the following in demonstrating that mineral development on the Best and Most Versatile Agricultural Land is necessary:

- whether there is an available alternative;
- whether the need for development outweighs the adverse impact upon agricultural land quality;
- whether proposals will affect the long term agricultural potential of the land or soils; and,
- whether alternative land of lower agricultural value has considerations which outweigh the adverse impact upon agricultural land quality.

7.78 It also states that the protection of the original soils removed prior to mineral extraction should always be a priority. Furthermore, the stripping and storage of soils for reuse and restoration can lead to degradation, although best practice in soil management can minimise the impacts of this damage. Planning applications should demonstrate how best practice measures for soil handling and storage will be achieved on site, throughout the life of the development. Reclamation schemes should incorporate remediation activities and after-use proposals that optimise the storage and use of best and most versatile soils.

7.79 The supporting text in the MWLP for Core Strategy policy *SD1: Sustainable design and energy efficiency* states that proposals should demonstrate the measures to be used to ensure that quarry sides and slopes are stable and will not result in landslip, either within the site or on adjoining land, both during and after the lifetime of the development. Waste stockpiles and mineral waste tips should be constructed and accessed so that they are unlikely to give rise to danger through instability, using suitable vegetation which can assist with stability and bring environmental benefit. Where there is any likelihood of instability, a stability report should be provided setting out measures appropriate to ensure the continued stability and integrity of infrastructure adjoining or close to the development site.

7.80 Through the implementation of the above policies and the supporting text in the MWLP, there will be **no residual significant negative effect** in relation to SA objective **17: Soil**.

Chapter 8
Monitoring

8.1 The SEA Regulations require that *"the responsible authority shall monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action"* and that the environmental report should provide information on *"a description of the measures envisaged concerning monitoring".* Monitoring proposals should be designed to provide information that can be used to highlight specific issues and significant effects, and which could help decision-making.

8.2 Monitoring should be focused on the significant sustainability effects that may give rise to irreversible damage (with a view to identifying trends before such damage is caused) and the significant effects where there is uncertainty in the SA and where monitoring would enable preventative or mitigation measures to be taken. Therefore, monitoring measures have been proposed in this SA Report in relation to all of the SA objectives in the SA Framework for which likely (or uncertain) significant negative effects have been identified from the MWLP.

8.3 **Table 8.1** sets out a number of suggested indicators for monitoring the potential significant effects of implementing the Plan. Where possible, the indicators proposed draw from those in the monitoring framework presented in the Publication Draft MWLP. However, additional indicators have been proposed where no relevant indicators are included in the Publication Draft MWLP (shown in italics).

8.4 The data used for monitoring in many cases will be provided by outside bodies. Information collected by other organisations (e.g. the Environment Agency) can also be used as a source of indicators. It is therefore recommended that the Council continues the dialogue with statutory environmental consultees and other stakeholders that has already been commenced, and works with them to agree the relevant sustainability effects to be monitored and to obtain information that is appropriate, up to date and reliable.

Table 8.1: Proposed Monitoring Framework for the Herefordshire Minerals and Waste Local Plan

SEA Objective	Proposed monitoring indicators (those not in the Publication Draft MWLP shown in *italics*)
Healthy and Prosperous Communities	
3. Protect and improve the health of the people of Herefordshire and reduce disparities in health geographically and demographically.	Record of new public access to outdoor spaces and impact on open spaces and rights of way. *The number and % of minerals and waste approvals that were for operational 'improvements' to existing sites to mitigate adverse effects on public health and/or enhance local amenity.* *The number and % of minerals and waste applications refused where concerns over public health acted as part of the reason for refusal.* *The number and % of minerals and waste approvals that included conditions concerning noise, hours of operations, traffic and lighting.* *The number and % of minerals and waste applications refused on cumulative impact grounds.* *The number and % of minerals and waste applications refused on more general health and amenity grounds.*
Transport and Access	
5. Reduce road traffic, congestion and pollution, and promote sustainable modes of transport and efficient movement patterns in the county.	Record of on-site transport methods and associated green infrastructure. Record of materials and/or energy recovered and indication of final destination. *The number and % of minerals and waste applications refused on transport grounds.* *The number and % of minerals and waste permissions that included non-road based transport.* *The number and % of minerals and waste approvals that included conditions concerning air pollution control.* *The number and % of minerals and waste permissions that included one or more of the following highway conditions: restricted vehicle numbers; restricted tonnages; restricted routings; and highway mitigation measures – the need for wheel washing, lorry sheeting etc.* *Number of minerals and waste planning applications granted contrary to the advice of Highways England.*
Built Environment	
6. Value, protect and enhance the character and built quality of settlements and neighbourhoods and the county's historic environment and cultural heritage.	Record of reclamation achieved and associated green infrastructure, including those relevant to historic context. *Number and % of minerals and waste applications refused on historic grounds.* *Number and % of all permitted minerals and waste applications that included conditions related to archaeology.* *Number and % of Listed Buildings and Scheduled Ancient Monuments on Buildings at Risk Register (Historic England).* *Number of minerals and waste planning applications granted contrary to the advice of Historic England.*

SEA Objective	Proposed monitoring indicators (those not in the Publication Draft MWLP shown in *italics*)
7. Value, protect and enhance the character and built quality of settlements and neighbourhoods.	Record of reclamation achieved and associated green infrastructure, including those relevant to historic context. *Number of minerals and waste applications refused on townscape sensitivity/character grounds per annum.*
Resource Consumption and Climate Change	
10. Reduce Herefordshire's vulnerability to the impacts of climate change as well as its contribution to the problem.	Record of on-site transport methods and associated green infrastructure. Data from Economic Development Team to indicate circular economy type activity. Record of materials and/or energy recovered and indication of final destination. *The number and % of minerals and waste permissions that included non-road based transport.* *The number and % of minerals and waste approvals that included conditions concerning air pollution control.* *The number and % of minerals and waste applications permitted that include low carbon energy initiatives/sources.*
Environmental	
12. Value, maintain, restore and expand county biodiversity and geodiversity.	Record of reclamation achieved and associated green infrastructure, including those relevant to historic context. *Number and % of minerals and waste applications refused on biodiversity and geodiversity grounds.* *Number of minerals and waste planning applications granted contrary to the advice of Natural England.* *Condition status of River Wye and River Lugg SAC/SSSIs (Natural England).*
13. Value, protect, enhance and restore the landscape quality of Herefordshire, including its rural areas and open spaces.	Record of reclamation achieved and associated green infrastructure, including those relevant to historic context. *Number and % of minerals and waste applications refused in AONB.* *Number of minerals and waste applications refused on landscape sensitivity/character grounds per annum.* *Number of minerals and waste planning applications granted contrary to the advice of Natural England.*
14. Value, protect and enhance the quality of watercourses and maximise the efficient use of water.	Record of waste management practice(s) presented and water quality assessments of the River Wye and River Lugg. *The number and % of minerals and waste applications refused on water quality/safeguarding grounds.* *The number and % of minerals and waste approvals that included conditions concerning water pollution control.* *Number of minerals and waste planning applications granted contrary to the advice of Natural England and/or Environment Agency.*

SEA Objective	Proposed monitoring indicators (those not in the Publication Draft MWLP shown in *italics*)
15. Reduce the risk of flooding and the resulting detriment to public well-being, the economy and the environment.	*The number and % of minerals and waste applications refused on flooding grounds.* *The number and % of minerals and waste approvals that included conditions to mitigate flood risk.* *The number and % of minerals and waste applications refused/permitted in flood risk zones 2b and 3.* *Number of minerals and waste planning applications granted contrary to the advice of the Environment Agency.*
16. Minimise noise, light, and air pollution.	*The number and % of minerals and waste approvals that included conditions concerning noise, hours of operations, traffic and lighting.* *The number and % of minerals and waste approvals that included conditions concerning air pollution control.*
17. Value, protect and enhance soil quality and resources.	*The number and % of minerals and waste approvals on Grade 1, 2 or 3a agricultural land.*

Chapter 9
Conclusion

9.1 The policies and site allocations included in the Publication Draft MWLP have been subject to a detailed appraisal against the SA objectives which were developed at the Scoping stage of the SA process.

9.2 The Publication Draft MWLP provides well-reasoned proposed policies and a clear guide to minerals and waste development based on sound sustainable development principles. In general, the Publication Draft MWLP has been found to have a wide range of positive and significant positive effects on the SA objectives, although a notable proportion of negative and significant negative effects have also been identified, mainly in relation to the allocation of particular minerals and waste sites. However, many of these effects are uncertain, as the likelihood of and severity of these effects will depend very much on the exact location, scale and design of minerals and waste developments pursued. In addition, many potential positive effects expected will depend on how well policy requirements from the Core Strategy and other policies within the MWLP are implemented, and the type of restoration achieved at minerals and waste sites.

9.3 The SA has inevitably had to make assumptions in coming to judgements of the effects of the Publication Draft MWLP. Our assumption with respect to effects, cumulative or otherwise, is on the basis of the intention of the Publication Draft MWLP (i.e. what it is trying to achieve). Past experience suggests that, when considering development proposals, there will often be tensions when applying different policies, and deciding where weight should apply. Despite the best intentions of the planning authority, it may not always be possible to deliver development that meets all policy criteria and good practice guidance, and difficult choices will often have to be made. This highlights the importance of monitoring the potential significant effects identified once the MWLP is adopted.

Next Steps

9.4 This SA Report will be available for consultation alongside the Publication Draft MWLP in early 2021 for a 6-week period.