Sustainability Appraisal Report

Hertfordshire Minerals and Waste Local Plan 2040

Hertfordshire County Council

June 2022

Hertfordshire

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Non-Technical Summary

Introduction

This report is the Sustainability Appraisal (SA) undertaken for the Hertfordshire Minerals and Waste Local Plan Draft Plan 2022 (hereafter referred to as 'the Plan').

This report has been published for consultation alongside the Plan to provide members of the public and statutory consultees the opportunity to view and comment on it.

The deadline for commenting on the Plan, this report and any other supporting document published for consultation alongside the Plan is 30 September 2022. Full details on how to respond to the consultation are available on the council's website at:

www.hertfordshire.gov.uk/mwlp

The Draft Hertfordshire Minerals and Waste Local Plan 2022

The council is required to maintain an up-to-date Minerals and Waste Local Plan. The Plan is effectively a first draft of the proposed new Plan, and it will eventually replace the current adopted Minerals and Waste Local Plan documents once it is adopted (anticipated in 2024).

The Plan contains 27 proposed planning policies covering numerous matters informed by national planning policy as well as the local context for minerals and waste development in the county. It includes a Vision which sets out the overarching aspirations for future minerals and waste development in Hertfordshire as well of a set of Objectives which will help achieve the Vision sustainably.

Sustainability Appraisal Stages

The SA is an iterative process which is being undertaken alongside the preparation of the Plan. The council is legally required to undertake SA. The stages involved in undertaking SA are set out below:

Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope

Stage A is referred to as the 'Scoping Stage'. The purpose of the Scoping Stage is to establish the baseline information for the plan area and to identify any key sustainability issues. The SA Objectives are also established at the Scoping Stage. The SA Objectives are supported by multiple criteria (also known as Sub Objectives) pertaining to the environmental, social and economic dimensions of sustainability (see Figure 1 below for the SA Objectives and their supporting criteria). The council prepared a draft Scoping Report (February 2022), followed by a final Scoping Report (June 2022) to set out the findings of the Scoping Stage and to evidence how Stage A has been met.

Stage B: Developing and Refining Options and Assessing Effects

Stage B is broadly comprised of the following steps:

- Developing the policies and reasonable alternative policies
- Evaluating the likely effects of all the policy options considered. This is achieved through scoring the options against the criteria within the SA Objectives (see Figure 1 below)
- Considering ways of mitigating any adverse effects identified through the evaluation/scoring process and maximising beneficial effects
- Proposing measures to monitor the significant effects of implementing the Plan (post-adoption)

Stage C: Preparing the Sustainability Appraisal Report

This stage describes the need to prepare the SA report. The information and findings from Stages A and B are used to inform the contents of the report.

All policies and reasonable alternative policies have been appraised within this report against the criteria of the SA Objectives. Recommendations and mitigations have been identified to maximise the beneficial effects of the preferred policies.

Stage D: Seek Representations on the Sustainability Appraisal Report from Consultation Bodies and the Public

This SA report has been published for consultation with the statutory consultees and the public to meet to requirements of Stage D.

Stage E: Monitoring Implementation of the Plan

Stage E takes place following adoption of the Plan. A set of monitoring indicators has been prepared and is included within this report (see Figure 12, Chapter 7). The indicators will

be used to monitor the effectiveness of the policies in the Plan, once it has been adopted. The monitoring will take place on an annual basis, through the Hertfordshire Authority's Monitoring Report.

Sustainability Context for Minerals and Waste Developments in Hertfordshire

In order to identify the key sustainability issues facing Hertfordshire it was necessary to characterise the social, economic and environmental aspects of the plan area. This information was collected at the Scoping Stage (i.e. Stage A as described above) and reported through the Scoping Report. A summary of the key sustainability issues identified at the Scoping Stage has been included within this report and can be seen in Table 3, Chapter 3.

Sustainability Appraisal Framework

The SA Framework consists of the SA Objectives and their supporting criteria which can be seen in Figure 1 below. The SA Framework is supported by criteria which have been developed to help determine the positive and negative effects of the policies during the appraisal process (see Figure 7, Chapter 4) as well as a scoring system which has been applied during the appraisal process (see Figure 6, Chapter 4).

Figure 1: Sustainability Appraisal Objectives

Objective	**Criteria (or 'Sub Objectives') to help determine whether the Objective is/ could be met**
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure	1.1. Ensure a sufficient supply of minerals to meet the county's needs over the plan period 1.2. Ensure that mineral sterilisation is minimised though the use of Mineral Safeguarding Areas 1.3. Encourage the extraction of minerals prior to other development taking place 1.4. Ensure the continued operation of minerals infrastructure through safeguarding
2. Encourage the appropriate location of and safeguard waste management facilities, including wastewater	2.1. Encourage the provision of appropriate waste management facilities as close as practicable to the origin of waste 2.2. Promote and support the co-location of waste management facilities

Objective	Criteria (or 'Sub Objectives') to help determine whether the Objective is/ could be met
	2.3. Protect and ensure the continued operation of the county's network of waste management facilities through safeguarding 2.4. Where appropriate, give priority to the re-use of previously developed land and sites identified for employment uses
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place	3.1. Encourage the increased use of recycled and secondary aggregates 3.2. Encourage the use of virgin materials on-site in the construction of non-mineral development 3.3. Promote the re-use, recovery and recycling of waste through circular economy principles.
4. Promote and encourage sustainable waste management facilities and practices	4.1. Oppose the disposal of waste to landfill, and where waste cannot be avoided, maximise its recovery 4.2. Promote the provision of well-designed, modern and efficient facilities 4.3. Work towards waste net self-sufficiency
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures	5.1. Reduce operational emissions through improved or enhanced technologies 5.2. Reduce greenhouse gas emissions from minerals and waste transportation and management activities. 5.3. 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.
6. Encourage the greater use of sustainable transport of minerals and waste, e.g. by road, rail and water	6.1. Reduce reliance on road freight movements and seek to increase the efficient use of rail and water where appropriate. 6.2. Encourage the use of low emission vehicles for the transportation of waste and minerals
7. Protect and positively contribute towards human health and wellbeing	7.1. Avoid or minimise adverse effects on human health and safety to acceptable levels 7.2. Provide opportunities to improve health and amenity through delivery of green and blue infrastructure, enhanced public rights of way and improved access to recreation.

Objective	Criteria (or 'Sub Objectives') to help determine whether the Objective is/ could be met
	7.3. Reduce the incidence of crime associated with waste (e.g. fly-tipping and illegal dumping of large volumes of waste). 7.4. Ensure that mineral sites (including their afteruse) do not compromise the operation and safety of aerodromes 7.5. Safeguard residential amenity by minimising noise, light and air pollution from activities associated with mineral and waste development
8. Protect and enhance the natural, built and historic environment	8.1. Reduce soil contamination and safeguard soil quality and quantity 8.2. Protect the County's best and most versatile agricultural land 8.3. Protect against the loss of priority habitats and species and provide opportunities for enhancing geodiversity and biodiversity and achieve net gains 8.4. Conserve and enhance the character and quality of Hertfordshire's landscapes and natural environmental assets including AONB's, historic landscapes, open spaces, parks and gardens and their settings. 8.5. Provide for the high quality and expedient restoration of land to an appropriate after-use 8.6. Ensure minerals and waste development conserves, protects and enhances designated and non-designated heritage assets (including archaeological assets and historic water features) and their setting
9. Protect against flooding and safeguard water quality and quantity	9.1. Protect against the risk of flooding and provide opportunities for flood alleviation and mitigation 9.2. Protect and enhance the quality of watercourses. 9.3. Maximise the efficient use of water and protect the quantity of ground and surface water from over abstraction. 9.4 Protect the quality of groundwater
10. Recognise the importance of the	10.1. Generate employment opportunities in the minerals and waste sectors for local people

Objective	Criteria (or 'Sub Objectives') to help determine whether the Objective is/ could be met
minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities	10.2. Ensure an adequate supply of materials for construction 10.3. Ensure appropriate waste infrastructure to manage current and future arisings

Sustainability Appraisal Findings

The findings of the SA for the Plan are summarised within Chapter 5 of this report.

Figure 2 below summarises the effects of all the preferred policies (i.e. those which have been included within the Plan), against each of the SA criteria. The full assessment of all policy options considered can be seen at Appendix 1 of this report.

Many of the preferred policies score positive effects against several of the SA criteria (see Figure 1 above), indicating where the policies will deliver benefits and will contribute positively towards sustainable development.

Figure 3 summarises the effects of the three Mineral Allocation Sites (MAS) identified within the Plan. The MAS have previously been assessed through a separate assessment process and the scores have been transposed within this report, using the SA scoring system (see Figure 6). See Chapter 4 in the main body of this report for more information on how the scores for the MAS' have been transposed.

Figure 2: SA Scores for Preferred Policies

Criteria	Policy																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1.1	0	++	0	0	?/+	++	++	++	++	0	0	0	0	++	0	0	0	0	0	0	0	0	0	0	0	0	0
1.2	0	?/+	0	0	++	++	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.3	0	++	0	0	++	?/+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4	0	?/++	0	++	0	0	0	0	0	+	0	0	0	0	0	0	0	0	0	0	0	0	++	++	0	0	0
2.1	++	0	++	0	0	0	0	++	0	++	++	0	0	++	0	0	0	0	0	0	0	?	?	0	0	0	0
2.2	?/++	0	?/+	0	0	0	0	0	0	?/+	++	0	0	0	0	0	0	0	0	0	0	?/+	?	0	0	0	0
2.3	0	0	0	++	0	0	0	0	0	+	0	0	0	0	0	0	0	0	0	0	0	++	?/+	0	0	0	0
2.4	0	0	++	0	0	0	0	0	0	?/++	++	0	0	++	?	0	0	0	0	0	0	?	?	0	0	0	0
3.1	++	?/++	++	?/+	0	?/+	?/+	++	0	++	++	++	++	?/++	0	++	0	0	0	0	0	0	?/+	0	0	0	0
3.2	0	0	0	0	++	0	0	0	++	0	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.3	+	++	++	?/+	?/+	?/+	?/+	++	0	++	++	++	++	?/++	0	++	++	0	0	0	0	++	?	0	0	0	0
4.1	0	++	++	0	0	0	0	++	0	++	++	++	++	?/++	0	0	?/++	0	0	0	0	+	?/+	0	0	0	0
4.2	++	?	++	0	0	0	0	0	0	++	++	++	++	?	++	++	+	+	++	++	++	++	?	++	++	++	+
4.3	0	++	++	+	?/+	?/+	?/+	++	0	++	++	++	++	?/++	0	0	?/+	0	0	0	0	++	0	0	0	0	0
5.1	++	0/?	++	0	?	?	?	?	?	++	++	?	?/+	0	0	0	?	0	++	+	0	?	++	++	?/+	+	0
5.2	++	0/+	++	0	+	?	+	++	++	++	++	?	+	0	0	0	?	0	++	++	0	?	++	++	++	++	0
5.3	++	0/?	++	0	?	?	?	?	?	?/+	++	?	?	0	0	0	?	0	?/+	?	0	?/+	?	+	?/+	?	0
6.1	+	+/-	++	0	?/+	?	?	++	++	++	++	?	?	0	0	0	?	0	?/+	+	0	?	++	++	++	?/++	0
6.2	++	0	++	0	0	?	?	?	?	?/+	++	?	?	0	0	0	?	0	?	+	0	?	++	++	?	?	0
7.1	+	?/++	++	++	?	?/+	?/+	?/+	?/++	++	++	++	++	?	++	++	?	++	++	++	++	++	?/+	++	++	++	0
7.2	+	++	++	0	+	?/+	?/+	?/+	?/++	?/+	++	++	++	++	++	++	?	?/++	++	++	?	0	0	++	++	++	0
7.3	0	0	++	+	?	0	0	0	0	?/++	+	?	?/+	?	?	0	?	0	?	?/+	0	?/+	?	0	0	?	0
7.4	0	?	?	?	?	?	?	?	?	?	?	?	++	?	?	?	?	?	?	?	?	?	?	?	?	?/++	++
7.5	+	?/+	++	++	?	?/+	?/+	?/+	?/+	++	++	++	++	?/+	++	++	?	++	++	++	0	++	?/+	++	++	++	0
8.1	0	?	0/+	0	?	?	?	?	?	?	+	?/+	++	?	++	?/++	++	?/+	?	?	?	?	?	0	?	?/+	0
8.2	0	?/-	?/+	0	?/+	?	?	?	?/-	?	?/+	?	++	?	?/++	?/++	+	?/+	?	?	?	?	?	0	?	?/+	0
8.3	++	?/++	+	0	?/+	?/+	?/+	++	?	++	++	?/++	++	++	++	++	++	++	++	++	++	?	?	++	++	++	++
8.4	++	++	++	0	?/+	?/+	?/+	++	?	++	++	?/++	++	++	++	++	++	++	++	++	++	?	?	++	++	++	?
8.5	++	++	++	+	?/+	?/+	?/+	++	++	++	++	++	++	++	?/++	++	+	++	++	++	+	0	0	0	+	++	+
8.6	0	++	0/+	0	?	?	+	?	?	++	++	?	++	0	?	++	?	++	?	?	?	?	?	++	?	++	0

9.1	++	?/+	0/+	0	?	?	?	?	?	?	++	?	?	0	++	++	?	?/+	?+	++	++	++	?	0	0	++	0
9.2	0	++	0/+	0	?	?	?	?	?	?	++	++	?	0	++	?/+	?	?/+	?/+	++	++	++	?	0	0	++	0
9.3	++	?	0/+	0	?	?	?	?	?	?	++	?/++	?	0	++	?/+	?	?/+	?/+	?/++	++	?	?	0	0	++	0
9.4	++	++	0/+	0	?	?	?	?	?	?	++	++	?	0	++	?/+	?	?/+	?/+	++	++	?	?	0	0	++	0
10.1	0	++	++	0/+	+	++	++	++	++	++	+	++	++	?/++	0	0	0	0	0	0	0	++	++	0	0	0	0
10.2	0	++	++	?/+	+	++	0	++	++	++	++	++	0	?/+	0	0	0	0	0	0	0	0	+	0	0	0	0
10.3	0	++	++	++	?/+	?/+	0	++	0	++	+	++	++	?/++	0	0	0	0	?/+	?	?	++	?/+	0	0	0	0

Figure 3: Site Selection Scores Transposed into SA Scoring System

Mineral Allocation Site	Sieve 3 Criteria																				
	Airport Safeguarding Zones	Ancient Woodland	Aquifers	BAP Priority Species or Habitats	BMV Land	Cumulative Effects	Ecological Status of Water Bodies	Flood Risk	Geodiversity	Green Belt	Groundwater Vulnerability	Heritage Assets	International and National Ecological Designations	Land Ownership	Landscape Designations	Local Nature Reserves and/or Local Wildlife Sites	Proximity of Allocated Residential or Build Development	Recreation	Restoration	Sensitive Land Uses	Sustainable Transport	Pollution to the Environment (dust, air, water)
Hatfield Aerodrome	-	0	-	+/++	-	0	--	+/++	0	0	-	--	0	0	0	+/++	-	--	0	--	--	0
Land Adjoining Coopers Green Lane	-	0	-	+/++	-	0	--	+/++	0	0	-	--	0	0	0	0	-	--	0	--	--	0
The Briggens Estate	0	--	-	+/++	-	0	--	+/++	0	0	-	--	0	0	0	-	-	--	0	--	--	0

Mitigation and Recommendations

Appendix 1 of this report provides full commentary of the SA appraisal results and includes recommended mitigation measures for the preferred polices, where opportunities to strengthen or improve the policies were identified. The appraisal resulted in recommended changes for preferred policies 2, 3 and 17.

Monitoring

A set of proposed monitoring indicators has been developed and included within Chapter 7 (see Figure 12) of this report. The indicators will be used to monitor the effectiveness of the policies in the Plan once its adopted. The monitoring will take place on an annual basis, through the Hertfordshire Authority's Monitoring Report. Monitoring is required by Stage E of the SA process.

Conclusions and Next Steps

The SA for the Plan appraised the policies considered for inclusion and transposed the scores of previous site assessment work undertaken for the MAS' into the scoring system applied within this SA.

The outcomes of the SA show that the preferred policies will bring many positive benefits. The appraisal resulted in some mitigation measures being recommended for a select few of the preferred policies. The proposed mitigation measures can be seen in Chapter 6 of this report.

The next stage of plan preparation will involve the publication of the Proposed Submission Plan for consultation (in line with Regulation 19 of The Town and Country Planning (Local Planning) (England) Regulations 2012) in March/April 2023. The Final SA Report will be published for consultation alongside the Proposed Submission Plan. The Final SA Report will include an appraisal of the contents of the Proposed Submission Plan and will be structured in a very similar way to this report.

Full Sustainability Appraisal Report of the Hertfordshire Minerals and Waste Local Plan (Draft Plan, Regulation 18)

1. Introduction

1.1 This Sustainability Appraisal (SA) Report has been prepared for the purpose of consultation under Regulation 18 of the Town and Country Planning (Local Planning) (England) Regulations 2012. This SA Report relates to the Hertfordshire Minerals and Waste Local Plan Draft Plan 2022 (hereafter referred to as 'the Plan') and it should be read in conjunction with it.

1.2 SA is a statutory requirement of the Planning and Compulsory Purchase Act 2004. It is integral to the preparation and development of a Local Plan to identify how sustainable development is being addressed.

1.3 In addition to SA, Local Plans must also be subject to a Strategic Environmental Assessment (SEA), as required by the Environmental Assessment of Plans and Programmes Regulations 2004 (hereafter referred to as the SEA Regulations).

1.4 The requirements to carry out SA and SEA are distinct, although it is possible to satisfy both using a single integrated SA process. This SA and any later iterations prepared to support the Plan incorporate the requirements of SEA. Where reference is made to the SA, it includes the requirements of SEA.

1.5 SA is an iterative process undertaken alongside plan making. SA is comprised of five main stages (Stages A to E) and this report meets the requirements of Stage D. Table 1 below identifies the SA stages against the stages of plan preparation.

Table 1: Timetable for the Emerging Plan and the SA Process[1]

Date	Stage of Plan Preparation	SA Process
January 2022-May 2022	Draft Plan and evidence base being prepared	Stage A: Scoping Report. Published for Consultation in February 2022 Stage B: Developing and refining options and assessing effects. Stage C: Preparing the Sustainability Appraisal Report.

[1] taken from the published Minerals and Waste Development Scheme (Dec 2021)

July 2022 - September 2022	Publication of Draft Plan for consultation (in line with Regulation 18 of the 2012 Regulations)	Stage D: First iteration of SA Report published for consultation alongside the Draft Plan
March-April 2023	Publication of Proposed Submission Plan for consultation (in line with Regulation 19 of the 2012 Regulations)	Stage D: Final SA Report published for consultation alongside the Proposed Submission Plan
February 2024	Adoption of the Plan	Stage E: Monitoring the significant effects of implementing the Plan. Stage E takes place following adoption of the plan.

1.6 Table 2 below sets out which parts of this report meet the requirements of SEA.

Table 2: SEA Requirements Checklist

SEA Requirement	Section of Report
An outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	Chapter 1 and Chapter 3
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	Chapter 3
The environmental characteristics of areas likely to be significantly affected	Chapter 3
Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC	Chapter 3
The environmental protection objectives, established at International, Community or Member State 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
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	Chapter 5 and Appendix 1
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 6

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 5 and Appendix 1 Chapter 2
A description of the measures envisaged concerning monitoring in accordance with Article 10	Chapter 7
A non-technical summary of the information provided under the above headings	At the beginning of the Report

Habitats Regulation Assessment (HRA)

1.7 The Planning Practice Guidance (PPG) states that SA should take account of the findings of a Habitats Regulations Assessment (HRA) if one is undertaken[2].

1.8 Under Article 6 (3) and (4) of the European Union Council Directive 92/43/EEC 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 HRA.

1.9 The purpose of HRA is to assess the impacts of a land-use plan against the conservation objectives of a 'European site' and to ascertain whether it would adversely affect the integrity of that site.

1.10 The HRA for the Plan is being undertaken separately by Land Use Consultants (LUC), on behalf of the council. Two Special Areas of Conservation (SACs) (Chilterns Beechwoods and Wormley-Hoddesdonpark Woods), and the Lee Valley Special Protection Area (SPA) and Ramsar site lie within Hertfordshire and the Plan therefore has the potential to impact on European Sites.

1.11 Policies within the Plan could also have the potential to affect European sites outside Hertfordshire, for example through hydrological or ecological connectivity, or in relation to emissions from major roads.

1.12 A HRA Report has been prepared to support the Plan and sets out findings from the assessments which will be considered in amending the Plan, following consultation. An outline of the findings of the HRA, along with a summary of how the Plan has been amended to consider the findings, will be set out in the next iteration of the SA Report, which will be published alongside the Proposed Submission Plan in March/April 2023.

[2] Paragraph: 011 Reference ID: 11-011-20140306

Geographical Context

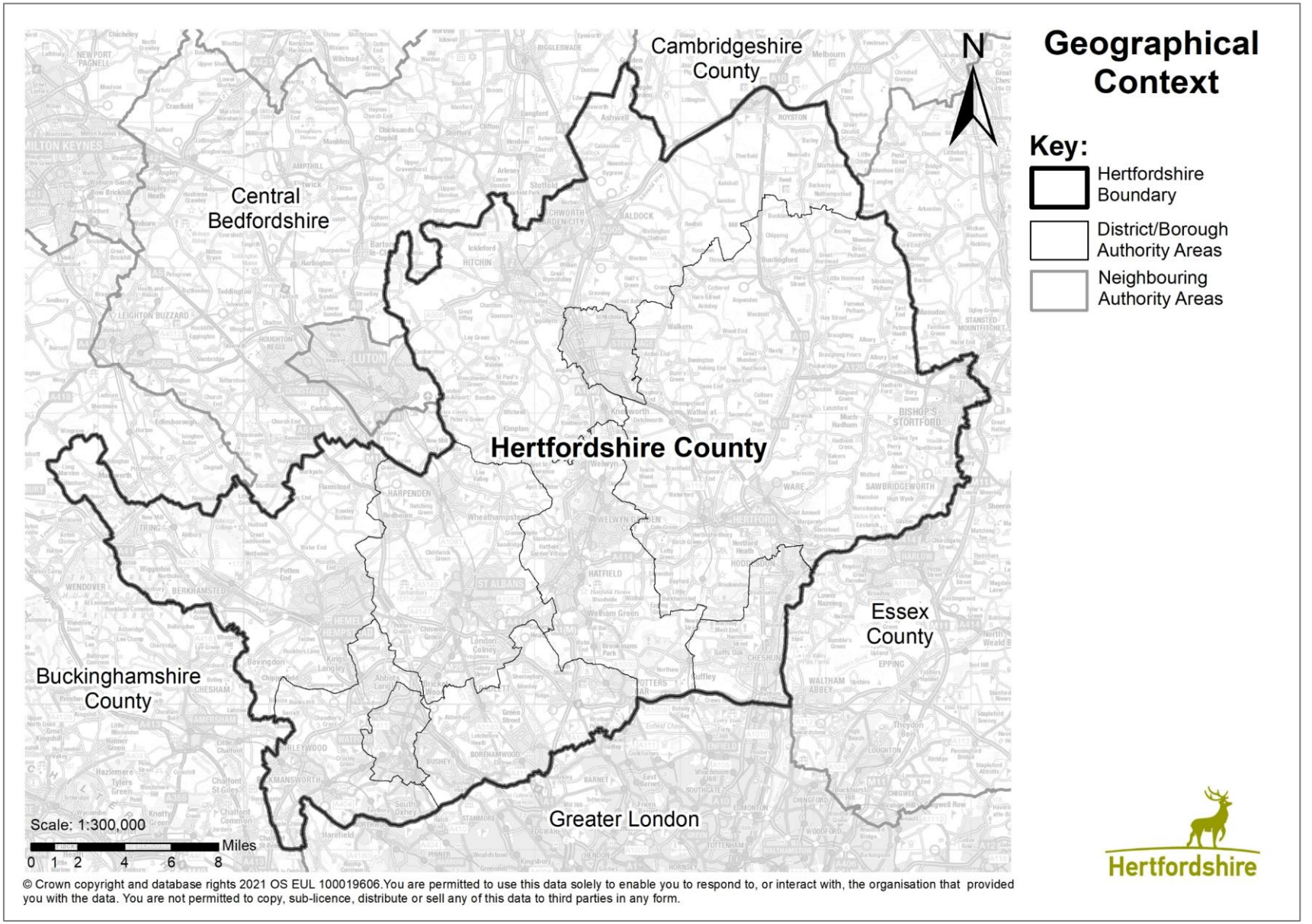
1.13 Hertfordshire is a landlocked county situated in the east of England which shares boundaries with Bedfordshire to the north, Cambridgeshire to the north-east, Essex to the east, Buckinghamshire to the west and Greater London to the south. The County includes ten Local Authorities (LAs): Broxbourne; Stevenage; Welwyn Hatfield; Hertsmere; Dacorum; North Hertfordshire; St. Albans City; Three Rivers; Watford and East Hertfordshire.

1.14 The largest town in Hertfordshire is Watford which has some of the characteristics of outer London. Cheshunt, Waltham Cross and Hoddesdon are old towns which now form an almost continuous belt of urbanisation extending out of London along the Lee Valley. St Albans, Hitchin, Hertford and Ware are historic market towns while Letchworth and Welwyn Garden City were the world's first garden cities. Stevenage, Hemel Hempstead and Hatfield are New Towns created since 1945.

1.15 The county covers an area of 164,300 hectares. Hertfordshire is defined by a varied landscape mosaic of chalk hills and plateaus sloping down from the chalk escarpment, in the northern part of the county. The landscape is cut by chalk river valleys, which form part of the Thames catchment. The tributaries of the Thames valley define its western edge with Buckinghamshire and the more open landscapes of Essex and Cambridgeshire comprise most of its eastern boundary. The valley of the River Lea creates a strongly defined south eastern boundary. The Chiltern Hills to the west and north-west of the county are designated as an Area of Outstanding Natural Beauty. The proximity of London and the pressures for development during the 20th century have resulted in the growth of suburban development in the southern part of Hertfordshire. This in turn led to the designation of a large proportion of the county as Green Belt comprising 84,640 hectares or 51.5%.

1.16 Hertfordshire is well connected nationally and internationally with four motorways (M1, A1(M), M11, and M25), three neighbouring international airports (London Stansted, London Luton and Heathrow) and four major rail lines (West Coast Main Line, the Midland Main Line, the East Coast Main Line, and the West Anglia Line).

Figure 4: Hertfordshire Geographical Context



The Draft Hertfordshire Minerals and Waste Local Plan

1.17 The Plan contains a Vision, ten Objectives and 27 policies. The Plan safeguards minerals and waste infrastructure and safeguards mineral resources. It identifies three Mineral Allocation Sites (MAS) which will provide the county with a sufficient supply of sand and gravel over the plan period (2020-2040). The Plan also supports new minerals and waste infrastructure to help close any identified capacity gaps over the plan period.

1.18 Once the Plan is adopted, it will replace the current adopted Minerals and Waste Local Plan documents, which are comprised of the following:

- The Waste Core Strategy and Development Management Policies Development Plan Document 2011-2026 (adopted November 2012)
- The Waste Site Allocations Development Plan Document 2011-2026 (adopted July 2014)
- The Minerals Local Plan 2002-2016 (adopted March 2007)

1.19 To support the adopted Local Plan documents the council also adopted the following Supplementary Planning Documents (which will also be replaced by the new Plan):

- The Minerals Consultation Areas Supplementary Planning Document (adopted November 2007)
- The Employment Land Areas of Search Supplementary Planning Document (adopted November 2015)

1.20 Prior to commencing work on the Plan, the Minerals and Waste Planning Authority (MWPA) had been carrying out separate reviews for the current adopted Minerals and Waste Local Plan documents.

1.21 In 2021, the MWPA made the decision to discontinue reviewing the plans separately. A report was presented to members of The Environment Cabinet Panel on 09 November 2021, setting out the authority's intention to merge the Plans to create a single Plan. An updated Minerals and Waste Development Scheme (MWDS) was also presented to members on 09 November 2021, which set out the proposed timeline for the preparation of the Plan.

1.22 The proposal to prepare a single joint plan and the proposed timeline for the preparation of the single Plan received final approved from members at a full Council meeting on 14 December 2021. The Plans which were under preparation prior to the approval of a single Plan, and their associated evidence base, were subsequently withdrawn and removed from the council's webpages, as required by Regulation 27 of the 2012 Regulations.

Structure of the Report

1.23 The remainder of this report is structured into the following sections:

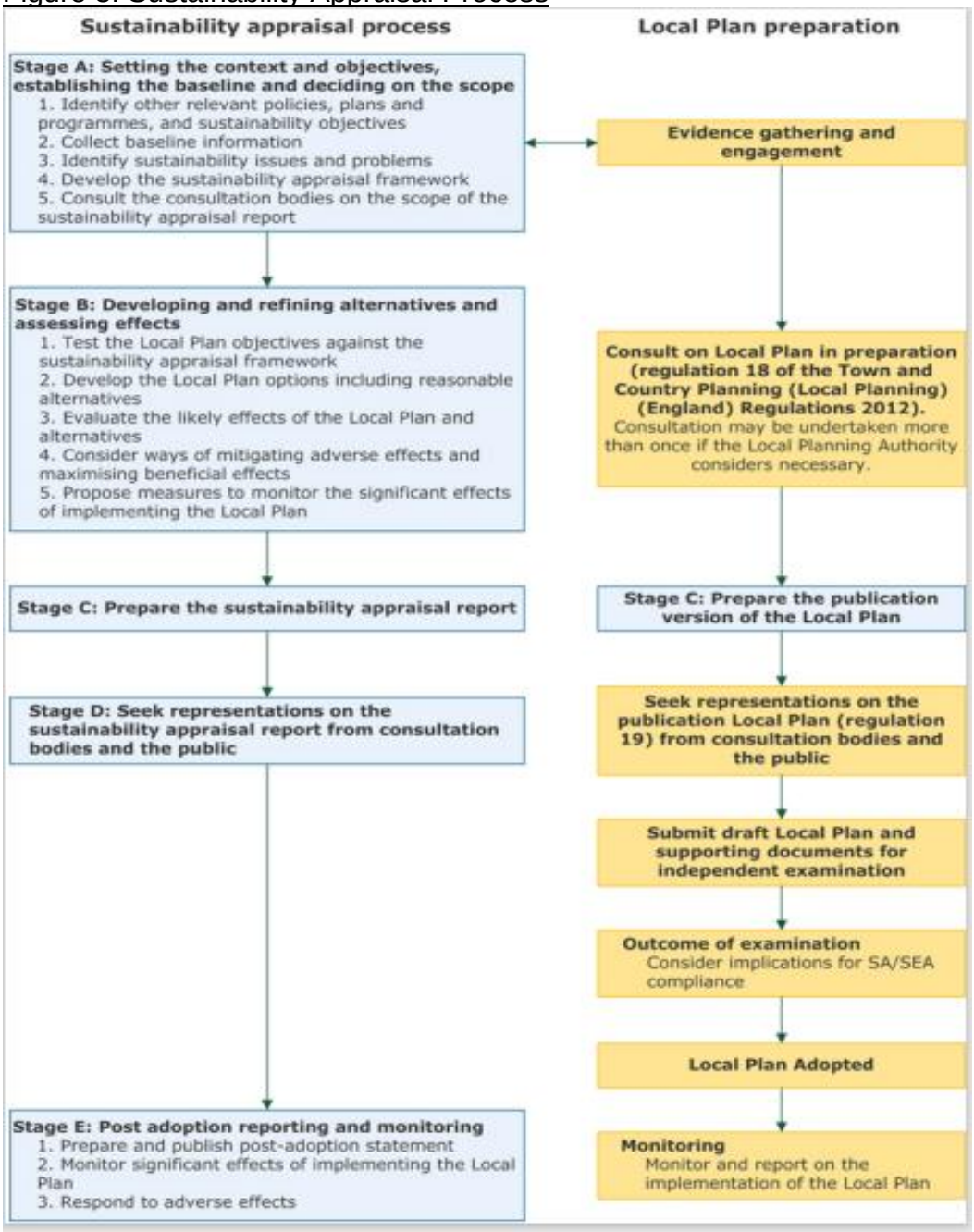
Chapter 2: Methodology
Chapter 3: Sustainability Context for Minerals and Waste Developments in Hertfordshire
Chapter 4: Sustainability Appraisal Framework
Chapter 5: Draft Minerals and Waste Local Plan Sustainability Appraisal Findings
Chapter 6: Mitigation and Recommendations
Chapter 7: Monitoring
Chapter 8: Conclusion and Next Steps

1.24 The main body of the report is supported by Appendix 1: Appraisal of All Policy Options.

2. Methodology

2.1 Chapter 2 describes the stages of the Sustainability Appraisal (SA) process undertaken to date and provides information on the subsequent stages of the process. The flow chart in Figure 5 below[3] provides a visual summary of the SA process against the stages of plan preparation.

Figure 5: Sustainability Appraisal Process



[3] Flow chart taken from the PPG, Paragraph: 013 Reference ID: 11-013-20140306

Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope

2.2 To meet the requirements of Stage A, a Scoping Report was prepared to establish the sustainability context for minerals and waste developments in Hertfordshire and to set out the Framework against which the policies of the plan will be appraised.

2.3 Work commenced on the Scoping Report following member approval of the new Plan and the associated MWDS on 14 December 2021. The draft Scoping Report was presented to members 03 February 2022 as an informative item.

2.4 To ensure compliance with the SEA Regulations, the draft Scoping Report[4] was subject to a 5-week consultation (from 03 February 2022 to 10 March 2022) with three statutory consultees; Natural England, Historic England and the Environment Agency[5]. The draft Scoping Report was also published on the council's minerals and waste planning webpages.

2.5 In addition to consulting the statutory consultees, feedback was also sought from internal Teams within the Council, specifically on the ten Objectives (see Table 4).

2.6 The feedback received from the statutory consultees and internal colleagues was duly considered and used to finalise the Scoping Report. The Final Scoping Report June 2022 has been published on the council's minerals and waste planning webpages and has been used to inform this Report.

Stage B: Developing and Refining Options and Assessing Effects

2.7 The steps required within Stage B[6] include:

1. Test the Local Plan Objectives against the SA Framework
2. Develop the Local Plan options including reasonable alternatives
3. Evaluate the likely effects of the Local Plan and alternatives
4. Consider ways of mitigating adverse effects and maximising beneficial effects
5. Propose measures to monitor the significant effects of implementing the Local Plan

2.8 The text below provides a summary of the work undertaken for each of the steps within Stage B:

Test the Local Plan Objectives against the SA Framework

2.9 The SA Objectives contained within the Framework (see Table 4, Chapter 4) are the same as the Objectives contained within the Plan. Traditionally, sustainability objectives are developed separately for the Local Plan and these are then tested against the Objectives of the SA Framework.

[4] The draft as presented to The Environment Cabinet Panel on 03 February 2022

[5] See Regulations 4 and 12 of the Environmental Assessment of Plans and Programmes Regulations 2004 (SEA Regulations) for consultation requirements at the Scoping Stage

[6] The steps required within the SA stages are set out within the Planning Practice Guidance, Paragraph: 013 Reference ID: 11-013-20140306

2.10 By preparing a single set of Objectives for the Local Plan and the SA, it should ensure that there is no conflict between the Objectives of the Local Plan and Objectives identified through the SA process.

2.11 If the Local Plan is intended to meet all of the Objectives of the SA Framework, then the two sets of objectives should naturally be the same.

Develop the Local Plan options including reasonable alternatives

2.12 In developing and considering policies for the Plan, the council is required to consider reasonable alternatives. Regulation 12 (2) of the SEA Regulations requires that:

"The (environmental or SA) report must identify, describe and evaluate the likely significant effects on the environment of —

(a) implementing the plan or programme; and

(b) reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme"

2.13 In developing the policies for the Plan, alternative policy options were developed and considered to meet the above requirements. The alternative policies can be seen at Appendix 1 alongside the preferred policies.

Evaluate the likely effects of the Local Plan and alternatives

2.14 The preferred policies and the alternative policy options have been scored against the SA Framework (see Table 4, Chapter 4) and subsequently evaluated. See Appendix 1 for the full appraisal of all policy options considered as well as justifications for selecting the preferred policies.

2.15 The SA findings are not the only factors taken into account when determining a preferred option to take forward in a plan. There will sometimes be an equal number of positive or negative effects identified for each policy option, such that it is not possible to 'rank' them based on sustainability performance alone in order to select a preferred option.

2.16 Factors such as public opinion, other Council targets and conformity with other plans, programmes and strategies may also be taken into account when selecting preferred options for the Plan.

Consider ways of mitigating adverse effects and maximising beneficial effects

2.17 Recommendations for mitigating any identified adverse effects are presented within Appendix 1 of this report and are also summarised within Chapter 6. These recommendations will be considered in amending the Plan, following consultation.

Propose measures to monitor the significant effects of implementing the Local Plan

2.18 Criteria for assessing the effects of the policies have been developed to support the policy appraisal process. The criteria for assessing the effects of the policies can been

seen in Figure 7 of this report. The examples of the positive and negative effects given in Figure 7 are indicative and are not meant to be prescriptive.

Stage C: Preparing the Sustainability Appraisal report

2.19 This SA Report describes the process undertaken to date in carrying out the SA of the Plan. It sets out the findings of the appraisal (Chapter 5) which highlight any likely significant effects and makes recommendations for improvements and or clarifications that may help to mitigate the identified negative effects and maximise the benefits of the Plan as it is drafted in full.

Stage D: Seek Representations on the SA Report from Consultation Bodies and the Public

2.20 This SA Report will be published for consultation alongside the Plan.

Stage E: Monitoring Implementation of the Plan

2.21 Stage E takes place following adoption of the Plan. A set of proposed monitoring indicators have been developed for implementation at the post-adoption stage and can be seen in Figure 12, Chapter 7. The indicators will be used to monitor the significant effects of the Plan. The monitoring will be reported annually through the Hertfordshire Authority's Monitoring Report.

Difficulties Encountered and Data Limitations

2.22 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.

2.23 The SA has been carried out at a high level, using a combination of pre-existing information, such as the Waste Needs Assessment (Hertfordshire County Council, 2022), national and regional data sets, spatial information in Geographical Information System (GIS), as well as from other specially commissioned assessments such as the HRA Report (LUC, 2022). However, the SA is not an Environmental Impact Assessment. 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.

3. Sustainability Context for Minerals and Waste Developments in Hertfordshire

Review of Plans, Policies and Programmes

3.1 The Plan 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 plans and programmes. 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:

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

(5) "the environmental protection objectives established at international, Community or National 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 In order to meet the requirements of Schedule 2 of the SEA Regulations, 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 Plan. This will help to identify any potential links that can be built upon and any inconsistencies and constraints addressed.

3.4 The relevant plans and programmes that have influenced the preparation of the Plan were identified at the Scoping Stage (Stage A) and can be seen in the Final Scoping Report June 2022 (see Chapter 2 of the Final Scoping Report).

Baseline Information and Key Sustainability Issues

3.5 Baseline information provides the basis for predicting and monitoring the likely sustainability effects of a Local Plan and helps to identify key sustainability issues and means of dealing with them.

3.6 Schedule 2 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

3.7 The baseline information, key sustainability issues arising from the baseline information and the likely evolution of the key issues without the implementation of the Plan were identified at the Scoping Stage and can be seen in the Final Scoping Report June 2022 (see Chapter 3 and Appendix 1 of the Final Scoping Report).

3.8 A summary of the key sustainability issues identified at the Scoping Stage and the likely evolution of the key issues without the implementation of the Plan, can be seen in Table 3 below.

Table 3: Summary of Key Sustainability Issues and their Likely Evolution Without the Plan

Topic	Key Sustainability Issue	Likely Evolution of the Issues without Implementation of the Minerals and Waste Local Plan
Minerals	Permitted reserves are running low and the landbank is below the required minimum.	In the absence of the new Plan, the permitted reserves and the landbank could drop even further.
Waste	Reliance on waste facilities outside the county to treat residual LAC waste. Significant capacity gap for the management of Non-Hazardous and C,D&E waste.	In the absence of the new Plan, it is likely that there would be a greater reliance on exporting residual and inert waste outside the county and waste developments could be sited in inappropriate locations
Air Quality	Poor air quality is experienced in a number of areas in Hertfordshire and 34 AQMAs have been declared.	In the absence of the new Plan, air quality in Hertfordshire is more likely to be adversely affected. New and retrofitted minerals and waste sites are likely to have less stringent mitigation.
Biodiversity and Geodiversity	Hertfordshire contains many areas of high ecological value including sites of international and national importance which are under pressure from farming and forestry, and also from development pressure for new housing and employment.	In the absence of the new Plan, it is more likely that the county's ecological assets could be adversely affected by poorly planned minerals waste developments, with less stringent mitigation measures and significant enhancement measures applied.
Climate Change	Hertfordshire is likely to experience more extreme impacts because of climate change.	In the absence of the new Plan, it is likely that contributions to climate change from minerals and waste developments in Hertfordshire will be less appropriately controlled and mitigated.
Historic Environment	There are areas of significant historical importance in Hertfordshire and aesthetic quality, settings and important views should be preserved and enhanced. These are continuously facing pressures for change.	In the absence of the new Plan, it is more likely that the county's historic assets could be adversely affected by poorly planned minerals and waste developments, or with less stringent mitigation measures and significant enhancement measures applied.
Landscape	The county has significant areas of landscape importance	In the absence of the new Plan, there is more potential for new minerals and waste developments to be located

Topic	Key Sustainability Issue	Likely Evolution of the Issues without Implementation of the Minerals and Waste Local Plan
	The Metropolitan Green Belt is under pressure from development. There is a deficiency of access to natural greenspace in certain parts of the county.	in sensitive areas leading to negative impacts on valued landscapes.
Water Resources and Flooding	Hertfordshire is affected, to varying degrees, by fluvial, groundwater, surface water, canal, reservoir and sewer flooding. The effects of climate change will most likely increase the incidence of flooding within the county.	In the absence of the new Plan, there could be an increase in the likelihood of future minerals and waste sites adversely affecting the county's groundwater and directly or indirectly increasing the risk of flooding.
Soil Quality	The majority of Hertfordshire consists of best and most versatile agricultural land, which could be lost to development.	In the absence of the new Plan, soil quality could be adversely affected by new minerals and waste developments
Crime	Hertfordshire generally has a low level of crime; however, there is a disparity between amount of crime in the most deprived areas and the least deprived areas.	In the absence of the new Plan, crime associated with waste, such as fly-tipping, could increase.
Culture, Leisure and Recreation	Improved provision and connectivity of recreational resources (be that to linear routes, open space, or recreational facilities) is required.	In the absence of the new Plan, minerals and waste developments are less likely to provide appropriate access to recreational resources.
Health	Health inequalities exist between the least and most deprived areas of the county.	In the absence of the new Plan, new minerals and waste developments are less likely to adequately consider and address human health and wellbeing.
Housing	There is a high demand for housing in Hertfordshire and this will have a direct impact on waste production and management and will contribute towards the demand for sand and gravel.	In the absence of the new Plan, new waste management facilities are less likely to be appropriately located and the county's supply of minerals could deplete.

Topic	Key Sustainability Issue	Likely Evolution of the Issues without Implementation of the Minerals and Waste Local Plan
Population	Hertfordshire's population is increasing. The number of elderly residents is increasing as people are living longer.	In the absence of the new Plan, new waste management facilities are less likely to be appropriately located in relation to densely populated areas of the county.
Social Inclusion and Deprivation	While the overall level of deprivation is low in the county, there are pockets of high deprivation.	In the absence of the new Plan, new employment opportunities provided through minerals and waste developments are less likely to be delivered. Opportunities to deliver social and health benefits through restored minerals sites (e.g. the benefits delivered through the provision of new landscapes and green infrastructure) could be missed.
Economy and Employment	Higher proportion of residents in Hertfordshire are economically active compared to regional and national averages. Gross weekly earnings remain higher than the regional and national averages.	In the absence of the new Plan, opportunities to build the local minerals and waste economies are less likely to be taken up.
Transport and Accessibility	High reliance on private cars. Traffic levels and congestion at peak times is a major issue. Hertfordshire's motorway and trunk road networks carry three times the national level of HGVs, with principal A roads carrying almost double the national levels. Most of Hertfordshire's rail network suffers with constraints.	In the absence of the new Plan, traffic growth and congestion 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.

4. Sustainability Appraisal Framework

4.1 Schedule 2(6) of the SEA Regulations require the Environmental Report to consider:

"The likely significant effects on the environment, including short, medium and long term effects, permanent and temporary effects, positive and negative effects and secondary, cumulative and synergistic effects, on issues such as -

(a) biodiversity,
(b) population,
(c) human health,
(d) fauna,
(e) flora,
(f) soil,
(g) water,
(h) air,
(i) climatic factors,
(j) material assets,
(k) cultural heritage including architectural and archaeological heritage,
(l) landscape and
(m) the inter-relationship between the issues referred to in sub-paragraphs (a)–(l)."

4.2 The development of a set of Sustainability Appraisal (SA) Objectives and Sub-Objectives is a recognised way in which the likely environmental and sustainability effects of a plan can be described, analysed and compared.

4.3 Table 4 below sets out the Framework of Objectives and Sub Objectives which have been developed for the SA of Plan. The Framework of Objectives and Sub Objectives were established and finalised at the Scoping Stage (Stage A).

Table 4: SA Framework

Objective	Sub-Objective / Criteria for Assessing the Effects
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure	1.1. Ensure a sufficient supply of minerals to meet the county's needs over the plan period 1.2. Ensure that mineral sterilisation is minimised though the use of Mineral Safeguarding Areas 1.3. Encourage the extraction of minerals prior to other development taking place 1.4. Ensure the continued operation of minerals infrastructure through safeguarding
2. Encourage the appropriate location of and safeguard waste management facilities, including wastewater	2.1. Encourage the provision of appropriate waste management facilities as close as practicable to the origin of waste 2.2. Promote and support the co-location of waste management facilities 2.3. Protect and ensure the continued operation of the county's network of waste management facilities through safeguarding 2.4. Where appropriate, give priority to the re-use of previously developed land and sites identified for employment uses
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place	3.1. Encourage the increased use of recycled and secondary aggregates 3.2. Encourage the use of virgin materials on-site in the construction of non-mineral development 3.3. Promote the re-use, recovery and recycling of waste through circular economy principles.
4. Promote and encourage sustainable waste management facilities and practices	4.1. Oppose the disposal of waste to landfill, and where waste cannot be avoided, maximise its recovery 4.2. Promote the provision of well-designed, modern and efficient facilities 4.3. Work towards waste net self-sufficiency

Objective	Sub-Objective / Criteria for Assessing the Effects
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures	5.1. Reduce operational emissions through improved or enhanced technologies 5.2. Reduce greenhouse gas emissions from minerals and waste transportation and management activities. 5.3. 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.
6. Encourage the greater use of sustainable transport of minerals and waste, e.g. by road, rail and water	6.1. Reduce reliance on road freight movements and seek to increase the efficient use of rail and water where appropriate. 6.2. Encourage the use of low emission vehicles for the transportation of waste and minerals
7. Protect and positively contribute towards human health and wellbeing	7.1. Avoid or minimise adverse effects on human health and safety to acceptable levels 7.2. Provide opportunities to improve health and amenity through delivery of green and blue infrastructure, enhanced public rights of way and improved access to recreation. 7.3. Reduce the incidence of crime associated with waste (e.g. fly-tipping and illegal dumping of large volumes of waste). 7.4. Ensure that mineral sites (including their afteruse) do not compromise the operation and safety of aerodromes 7.5. Safeguard residential amenity by minimising noise, light and air pollution from activities associated with mineral and waste development
8. Protect and enhance the natural, built and historic environment	8.1. Reduce soil contamination and safeguard soil quality and quantity 8.2. Protect the County's best and most versatile agricultural land 8.3. Protect against the loss of priority habitats and species and provide opportunities for enhancing geodiversity and biodiversity and achieve net gains

Objective	Sub-Objective / Criteria for Assessing the Effects
	8.4. Conserve and enhance the character and quality of Hertfordshire's landscapes and natural environmental assets including AONB's, historic landscapes, open spaces, parks and gardens and their settings. 8.5. Provide for the high quality and expedient restoration of land to an appropriate after-use 8.6. Ensure minerals and waste development conserves, protects and enhances designated and non-designated heritage assets (including archaeological assets and historic water features) and their setting
9. Protect against flooding and safeguard water quality and quantity	9.1. Protect against the risk of flooding and provide opportunities for flood alleviation and mitigation 9.2. Protect and enhance the quality of watercourses. 9.3. Maximise the efficient use of water and protect the quantity of ground and surface water from over abstraction. 9.4 Protect the quality of groundwater
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities	10.1. Generate employment opportunities in the minerals and waste sectors for local people 10.2. Ensure an adequate supply of materials for construction 10.3. Ensure appropriate waste infrastructure to manage current and future arisings

Appraisal Methodology

4.4 All policy options considered have been assessed against each of the criteria (Sub Objectives) within the SA Framework and a judgement has been made with regards to the likely effect each option would have on the Objectives of the Framework. These assessments are set out in Appendix 1 and summarised in Chapter 5 of this report. The judgements were recorded using the scoring system shown below in Figure 6:

Figure 6: Scoring System

++	Likely **significant positive** effect
+	Likely **minor positive** effect
0	Likely **negligible or no** effect
+/-	Likely **mixed** effect
-	Likely **minor negative** effect
--	Likely **significant negative** effect
?	Effects of the policy are **uncertain**

4.5 Figure 7 below shows the criteria used to help assess if a policy should score a significant positive or a significant negative effect. The examples of the positive and negative effects given in Figure 7 are indicative and are not meant to be prescriptive.

4.6 The likely effects of policies need to be determined and their significance assessed, which inevitably requires a series of judgments to be made. The appraisal (Appendix 1) has attempted to differentiate between the most significant effects and other more minor effects using the symbols shown in Figure 6 and through the application of the positive and negative effects given in Figure 7 below.

Figure 7: Criteria for Assessing the Effects of the Policies

Sub Objective	Significant Positive Effect	Significant Negative Effect
1.1. Ensure a sufficient supply of minerals to meet the county's needs over the plan period	Allocated mineral extraction sites Allowance for non-conventional aggregate extraction (Borrow pits, incidental extraction, extraction outside of Allocated Sites where landbank is low or extraction arising from agreed prior extraction ahead of non-minerals development) Provides a mechanism for extraction where additional need can be justified	No mineral sites allocated No mechanisms to allow for extraction outside Allocated Sites
1.2. Ensure that mineral sterilisation is minimised though the use of Mineral Safeguarding Areas	Existing safeguarded areas retained New safeguarding areas designated Where sterilisation is unavoidable, it is at least minimised	Existing safeguarded areas undesignated without good reason No encouragement of at least some mineral recovery, where mineral sterilisation is unavoidable
1.3. Encourage the extraction of minerals prior to other development taking place	Encourage prior extraction ahead of non-mineral development taking place Encourage cooperation and consultation with Local Planning Authorities	Mineral resources sterilised by other forms of development
1.4. Ensure the continued operation of minerals infrastructure through safeguarding	Safeguarding areas and consultation areas identified for mineral infrastructure Where loss of mineral infrastructure is proposed, alternative provision is required	Allowing for the loss of mineral infrastructure No alternative provision Does not support use of existing mineral infrastructure

Sub Objective	Significant Positive Effect	Significant Negative Effect
	Support for development proposals to actively seek opportunities to use existing mineral infrastructure	
2.1. Encourage the provision of appropriate waste management facilities as close as practicable to the origin of waste	Waste management facilities located close to the origin of waste and connected to the primary road network Waste management facilities intended for access/ utilisation by the public located in accessible locations, close to the origin of waste	Waste management facilities located poorly in relation to the origin of waste and the primary road network Inappropriate facilities located close to urban developments Waste management facilities intended for access/utilisation by the public in inaccessible locations, away from the origin of waste
2.2. Promote and support the co-location of waste management facilities	Supports the development of new waste management facilities adjacent to already established waste management facilities	Missed opportunities for the co-location of waste management facilities
2.3. Protect and ensure the continued operation of the county's network of waste management facilities through safeguarding	Does not result in the loss of existing waste management facilities Safeguarding areas and consultation areas identified for waste management facilities Facilitates consultation with Local Planning Authorities where safeguarded facilities could be jeopardised by other forms of development	Results in the loss of existing waste management facilities Does not prohibit the development of incompatible uses within the vicinity of existing facilities which results in limitations to the operation of the facility
2.4. Where appropriate, give priority to the re-use of previously developed land and sites	Priority given to the re-use of brownfield and employment land	Results in the de-prioritisation of brownfield and employment land

Sub Objective	Significant Positive Effect	Significant Negative Effect
identified for employment uses		
3.1. Encourage the increased use of recycled and secondary aggregates	Encourages and supports new facilities for the production of secondary and recycled aggregates Encourages the use of secondary and recycled aggregates within built development, as an alternative to primary materials	Loss of facilities that produce secondary and recycled aggregates Missed opportunities to utilise secondary or recycled aggregate
3.2. Encourage the use of virgin materials on-site in the construction of non-mineral development	Encourages opportunistic extraction of minerals during non-mineral development	Missed opportunities to utilise mineral deposits on-site where they could be potentially uncovered during non-mineral development
3.3. Promote the re-use, recovery and recycling of waste through circular economy principles.	Reduces waste arisings Reduces amount of waste requiring disposal Encourages use of secondary and recycled products	Results in an increase in waste arisings Results in an increase in waste sent to landfill Large proportion of waste arisings are treated 'lower down' the waste hierarchy
4.1. Oppose the disposal of waste to landfill, and where waste cannot be avoided, maximise its recovery	Does not facilitate the provision of new landfill Encourages waste management practices up the waste hierarchy, away from landfill	Allows for new landfill facilities Doesn't encourage waste management practices up the waste hierarchy
4.2. Promote the provision of well-designed, modern and efficient facilities	Promotes sustainable design Encourages new technologies for the treatment of waste	Does not promote sustainable design Does not allow for technological innovation

Sub Objective	Significant Positive Effect	Significant Negative Effect
4.3. Work towards waste net self-sufficiency	Waste arising dealt with within plan area, where appropriate and sustainable to do so Encourages new facilities which will help to close identified capacity gaps Existing network of waste management facilities retained	Large proportion of waste managed outside of plan area Loss of existing waste management capacity
5.1. Reduce operational emissions through improved or enhanced technologies	Support for new technologies which enable reduced emissions	No support for new technologies which enable reduced emissions
5.2. Reduce greenhouse gas emissions from minerals and waste transportation and management activities	Supports electric vehicles/lower emission vehicles Supports reduction in vehicle miles/distance travelled by vehicles Support alternative, more sustainable modes of transport including rail, water and conveyor Support for energy use from renewable and or low carbon sources for management activities	No support for energy use from renewable and or low carbon sources which reduce greenhouse gas emissions from transportation and management activities Maximises reliance on movements of minerals and waste via road No encouragement for alternative sustainable modes of transport
5.3. Promote energy efficiency by encouraging the use of energy efficient buildings and plant, and the use of appropriate renewable	Results in an increase in energy use from renewable and or low carbon sources Promotes energy efficiency throughout buildings and plan machinery	Results in inefficient energy use Does not reduce the consumption of non-renewable energy

Sub Objective	Significant Positive Effect	Significant Negative Effect
or lower carbon energy sources on site		
6.1. Reduce reliance on road freight movements and seek to increase the efficient use of rail and water where appropriate.	Results in increased capacity of the rail or water freight network Supports the use of non-road transportation methods Supports a decrease in vehicle movements	Results in decreased capacity of the rail or water freight network Encourages a greater reliance on road freight
6.2. Encourage the use of low emission vehicles for the transportation of waste and minerals	Supports electric vehicles/low emission vehicles (e.g. through the installation of electric vehicle charging points) Supports use of rail to transport material over greater distances	Increases use of high emission vehicles No support for/mechanisms which would support low emission vehicles No support for use of rail to transport material
7.1. Avoid or minimise adverse effects on human health and safety to acceptable levels	Provides opportunities that would enhance human health opportunities (e.g. creation of new green infrastructure assets) Where adverse impacts cannot be avoided they are minimised as far as possible	Results in adverse effects on human health and safety Adverse effects on human health and safety are not minimised where there is opportunity to do so
7.2. Provide opportunities to improve health and amenity through delivery of green and blue infrastructure, enhanced public rights of way and improved access to recreation	Allows for the delivery of green and or blue infrastructure, and or enhanced rights of way for the benefit of Hertfordshire residents Restored sites are easily accessible to all	Does not allow for the delivery of green and or blue infrastructure, and or enhanced rights of way for the benefit of Hertfordshire residents Restored sites are not easily accessible to all
7.3. Reduce the incidence of crime associated with waste	Mechanisms to prevent the loss of waste management facilities	No mechanisms to prevent the loss of waste management facilities

Sub Objective	Significant Positive Effect	Significant Negative Effect
(e.g. fly-tipping and illegal dumping of large volumes of waste)	Ensure mechanism for delivering new waste management capacity to close identified gaps and subsequently ensure an adequate network of facilities to manage different waste streams Waste Management Facilities in accessible locations	No mechanism to support the delivery of new waste management facilities to help close identified capacity gaps Waste Management Facilities in inaccessible locations
7.4. Ensure that mineral sites (including their afteruse) do not compromise the operation and safety of aerodromes	Operation and safety of airports and technical sites (within designated Aerodrome Safeguarding Areas) maintained Potential for bird strike hazards adequately considered	No consideration given to the operation and safety of airports and technical sites within designated Aerodrome Safeguarding Areas No consideration given to potential for bird strike hazards
7.5. Safeguard residential amenity by minimising noise, light and air pollution from activities associated with mineral and waste development	Noise is minimised to acceptable levels Dark skies are protected from light pollution and less invasive lighting is promoted Air pollution is minimised Existing Air Quality Management Plans and their objectives considered	Noise emissions are not controlled Dark skies are not protected from light pollution No measures to minimise air pollution No regards for existing Air Quality Management Plans and their objectives
8.1. Reduce soil contamination and safeguard soil quality and quantity	Quantity of soil is protected Prevention of soil contamination and where it is unavoidable it is minimised	Reduction in quantity of soil Reduction in quality of soil No measures to avoid or minimise soil contamination
8.2. Protect the County's best and most versatile agricultural land	Minimises development on greenfield sites Results in preservation of the best and most versatile agricultural land	Encourages development on greenfield sites

Sub Objective	Significant Positive Effect	Significant Negative Effect
		Results in harm or loss to the best and most versatile agricultural land
8.3. Protect against the loss of priority habitats and species and provide opportunities for enhancing geodiversity and biodiversity and achieve net gains	Protects priority habitats and species from loss and provides opportunities for enhancement Provides opportunities for enhancing geodiversity Provides opportunities for enhancing biodiversity and achieving net gains	Results in adverse impact on priority habitats and species Results in reduced quality of geodiversity Results in adverse effects on existing biodiversity and does provide opportunities for enhancement or net gain
8.4. Conserve and enhance the character and quality of Hertfordshire's landscapes and natural environmental assets including AONB's, historic landscapes, open spaces, parks and gardens and their settings	Provides protection and or enhancement for existing landscapes and natural environmental assets Results in the protection and or enhancement of designated landscapes	Results in the loss or degradation of the character and quality of existing landscapes and natural environmental assets Results in the loss or degradation of designated landscapes
8.5. Provide for the high quality and expedient restoration of land to an appropriate after-use	Results in timely restoration which takes in a phased manner where appropriate Where appropriate, results in agricultural land which is of an equivalent grade to that which existed at the site prior to extraction of minerals	Results in untimely restoration Results in a lower agricultural land grading to that which existed prior to mineral extraction Results in incompatible after-use which does not respect the local area

Sub Objective	Significant Positive Effect	Significant Negative Effect
	Results in after-use which is compatible with and respects the landscape character of the area	
8.6. Ensure minerals and waste development conserves, protects and enhances designated and non-designated heritage assets (including archaeological assets and historic water features) and their setting	Conserves, protects, and where appropriate enhances designated and non-designated heritage assets to a degree commensurate with their status Encourages use of relevant historic, archaeological and environmental sources, and appropriate expertise, to inform any mitigation measures required	Results in the degradation of the historic environment and or designated and non-designated heritage assets Does not encourage the use of appropriate sources of information to inform and identify potential adverse impacts to the historic environment and or designated and non-designated heritage assets
9.1. Protect against the risk of flooding and provide opportunities for flood alleviation and mitigation	Proposals contribute to flood risk reduction Results in development or operations on-site being directed away from areas at high risk of flooding Proposals positively manage flood risk including surface water run-off (e.g., through meeting the national and local standards for SuDS design) Where development is proposed on land at risk of flooding, a sequential approach is applied	Results in an increased risk of flooding Results in poorly located development or operations in areas that are at high risk of flooding Does not appropriately manage risk of flooding through implementing measures such as adequately designs SuDS A sequential approach is not required in areas where land is at risk of flooding
9.2. Protect and enhance the quality of watercourses	Results in conservation and enhancement of the water environment including the quality of watercourses	Results in degradation or unacceptable impacts on watercourses

Sub Objective	Significant Positive Effect	Significant Negative Effect
	Results in no unacceptable adverse impacts to the amenity value of water resources	Results in unacceptable adverse impacts to the amenity value of water resources
9.3. Maximise the efficient use of water and protect the quantity of ground and surface water from over abstraction	Results in the efficient use of water and maximises efficiency in use where possible Protects the quantity of groundwater and surface water from over abstraction.	Results in inefficient use of water Results in a reduced quantity of groundwater and surface water resulting from over abstraction
9.4 Protect the quality of groundwater	Results in no adverse impacts on the flow and quality of groundwater	Results in adverse impacts on the flow and quality of groundwater
10.1. Generate employment opportunities in the minerals and waste sectors for local people	Results in increase opportunities for employment within the minerals and waste sectors	Decreases or does not provide new opportunities for employment within the minerals and waste sectors
10.2. Ensure an adequate supply of materials for construction	Results in timely construction that is not delayed due to lack of sufficient materials Promotes the use of secondary and recycled materials in in addition to or in replacement of primary construction materials	Results in delays to construction due to a lack of materials Promotes reliance on primary construction materials only
10.3. Ensure appropriate waste infrastructure to manage current and future arisings	Ensures appropriate waste infrastructure is delivered alongside or ahead of development, as and where necessary Existing waste infrastructure is retained Results in new waste infrastructure that helps to close the identified capacity gaps	Untimely delivery of waste infrastructure to support new development Result in loss of existing waste infrastructure Results in new waste infrastructure that does not help to close the identified capacity gaps

Sustainability Appraisal Framework for Sites

4.7 The SA Framework outlined above, including the Framework of Objectives, the scoring system, and the criteria for assessing effects, relate to the appraisal of the policies in the Plan.

4.8 The assessment of the Minerals Allocation Sites (MAS) identified within the Plan has been undertaken using a slightly different process.

4.9 The MASs identified within the Plan (which include: The Briggens Estate, Hatfield Aerodrome and Land adjoining Coopers Green Lane (Hatfield Quarry)) have been assessed previously within a Site Selection Report (August 2018) prepared by Land Use Consultants on behalf of the council. As explained in the Introduction of this report, prior to commencing work on the Plan, the Minerals and Waste Planning Authority (MWPA) had been carrying out separate reviews for the current adopted Minerals and Waste Local Plan documents.

4.10 The review of the adopted Minerals Local Plan (2007) started in 2014 and the emerging document reached Proposed Submission stage in January 2019. The Proposed Submission Plan included mineral sites which had been identified through a stringent site assessment exercise.

4.11 The Site Selection Report was prepared to support the separate Minerals Local Plan. The Report was used to detail site assessments for each of the mineral sites considered for inclusion within the separate Minerals Local Plan.

4.12 The sites considered for inclusion consisted of the sites submitted to the council in response to a Call for Sites exercise (The Briggens Estate, Hatfield Aerodrome and Land adjoining Coopers Green Lane (Hatfield Quarry) were included within the group of submitted sites) and the three Preferred Areas identified within the adopted Minerals Local Plan.

4.13 The methodology applied to assess the sites within the Site Selection Report was comprised of three stages called ‘Sieves’ which, when applied to the group of sites, progressively narrowed it down by discounting sites from the study which did not meet the criteria.

4.14 Sieve 1 looked at major constraints and ruled out any previously worked sites, sites within urban areas or sites with extant planning permission for other forms of development.

4.15 Sieve 2 verified evidence relating to commercial viability and deliverability. Sieve 2 was not an exclusionary sieving stage. For sites put forward during the Call for Sites exercise, a certain level of information was expected to be provided by the site promoter to demonstrate that their proposed site was economically viable.

4.16 Sieve 3[7] assessed the sites against more detailed environmental and planning constraints and issues to identify the sites most appropriate for inclusion within the emerging Minerals Local Plan. Sieve 3 contained 22 criteria. Each criterion was considered in turn to inform a detailed comparative evaluation of the sites.

4.17 The site assessment methodology applied within the Site Selection Report ties in with the assessment methodology of this SA. The detailed site assessment criteria from Sieve 3 can be aligned with the Sustainability Objectives of this SA. A breakdown of the alignment is shown in Figure 8 below.

Figure 8: Sieve 3 Assessment Criteria links to Sustainability Objectives

Sieve 1 Constraints	Link to SA Objectives
Is the site within an urban area? Does the site have extant planning permission for other forms of development? Has the site been previously worked?	1
Sieve 2 Criterion	**Link to SA Objectives**
Is the site with a resource area? Tonnage of calculated reserves? Economic viability assessed by proposer? Economic viability allows for mitigation? Deliverability: operator willing? Deliverability: landowner willing?	1 10
Sieve 3 Site Assessment Criterion	**Link to SA Objectives**
Airport Safeguarding Zones	7
Ancient Woodland	8
Aquifers	9
BAP Priority Species or Habitats	8
BMV Land	8
Cumulative Effects	5, 6, 7, 8 & 9
Ecological Status of Water Bodies	9
Flood Risk	9
Geodiversity	8
Green Belt	8
Groundwater Vulnerability	9

[7] Whilst most of the site selection judgements throughout the Sieves were completed through a desk-based study, site visits were also undertaken during Sieve 3 to verify judgements.

Heritage Assets	8
International and National Ecological Designations	8
Land Ownership	No related sustainability Objectives. It is not appropriate to include land ownership issues within the sustainability Objectives.
Landscape Designations	8
Local Nature Reserves and/or Local Wildlife Sites	8
Proximity of Allocated Residential or Build Development	1, 3 & 7
Recreation	7
Restoration	8
Sensitive Land Uses	7
Sustainable Transport	5, 6
Pollution to the Environment (dust, air, water)	5, 6, 7 & 9

4.18 Not all the Sustainability Objectives can be aligned to the Site Selection Report Sieve criteria. The Sustainability Objectives cover waste specific topics which cannot be transposed to align with the Sieve criteria. For example, Sustainability Objective 4 of the SA Framework (see Table 4) relates to promoting and encouraging sustainable waste management facilities and practices. There is no applicable Sieve Criteria to match this Objective to.

4.19 The scoring system applied to the sites within the Site Selection Report differs slightly from the scoring system applied within this SA (see Figure 6). The SA scoring system uses a scale ranging from ‘Likely significant negative effect’ (- -) to ‘Likely significant positive effect’ (++). The Site Selection Report uses a traffic light impact rating system which ranges from Very High impact to Positive impact. An alignment of the two scoring systems can be seen in Figure 9 below:

Figure 9: SA Scoring System Vs Site Selection Scoring System

Likely significant positive effect	++	Positive	There are positive impacts or benefits/ enhancements
Likely minor positive effect	+		
Likely negligible or no effect	0	Low	There are no/insignificant impact(s)/ issue(s)
Likely mixed effect	+/-		
Likely minor negative effect	-	Medium	There is a minor/moderate impact/issue which may be acceptable (and may involve mitigation)
Likely significant negative effect	- -	High	There is a major impact/issue which may or may not be adequately mitigated
		Very High	There is an impact on a site or area of international or national significance within which working will only be permitted once an exception or alternative test in national policy have been met
Effects of the policy are uncertain	?		

4.20 Using the above scoring alignment, the scores for the three MASs have been transposed into the scoring system applied within this SA. See Chapter 5 for the transposed scores.

4.21 The Site Selection Report (August 2018) referred to within this Chapter is available to view. It has been published as one of the supporting documents alongside the consultation on the Plan and can be found on the council's website:

www.hertfordshire.gov.uk/mwlp

4.22 For more information on the previous site assessment work undertaken for the MAS' identified within the Plan, please also see the Spatial Strategy for Minerals (SSM) July 2022. The SSM has been published as a supporting document alongside the consultation on the Plan and can be accessed via the link above.

5. Draft Minerals and Waste Local Plan Sustainability Appraisal Findings

5.1 This chapter describes the likely sustainability effects of the contents of the Plan, including the effects of the 27 Strategic Policies and the three Mineral Allocation Sites (MAS).

5.2 The full appraisal of each policy is presented in Appendix 1: Appraisal of All Policy Options. Each policy has been assessed on its own, without taking into consideration the mitigation that might be provided by the other policies within the Plan. Alternative options have been prepared for each policy, in line with the SEA requirements. Appraisals of the alternative policy options are also contained within Appendix 1.

Appraisal of Sustainability Objectives

5.3 The Objectives contained within the Plan are the same as the Sustainability Appraisal (SA) Objectives contained within the Framework (see Table 4, Chapter 4).

5.4 By preparing a single set of Objectives for the Plan and the SA Framework, it should ensure that there is no conflict between the Objectives of the Plan and Objectives identified through the SA process. If the Plan is intended to meet all of the Objectives of the SA Framework, then the two sets of objectives should naturally be the same. For this reason, the Objectives of the Plan have not been appraised.

Appraisal of Mineral Allocation Sites

5.5 Using the scoring alignment shown in Figure 6, the scores for the three MAS against the Sieve 3 criteria of the Site Selection Report (August 2018), have been transposed into the scoring system applied within this SA. The transposed scores can be seen below in Figure 10.

Figure 10: Site Selection Scores transposed into SA Scoring System

Mineral Allocation Site	Sieve 3 Criteria																				
	Airport Safeguarding Zones	Ancient Woodland	Aquifers	BAP Priority Species or Habitats	BMV Land	Cumulative Effects	Ecological Status of Water Bodies	Flood Risk	Geodiversity	Green Belt	Groundwater Vulnerability	Heritage Assets	International and National Ecological Designations	Land Ownership	Landscape Designations	Local Nature Reserves and/or Local Wildlife Sites	Proximity of Allocated Residential or Build Development	Recreation	Restoration	Sensitive Land Uses	Sustainable Transport	Pollution to the Environment (dust, air, water)
Hatfield Aerodrome	-	0	-	+/++	-	0	--	+/++	0	0	-	--	0	0	0	+/++	-	--	0	--	--	0
Land Adjoining Coopers Green Lane (Hatfield Quarry)	-	0	-	+/++	-	0	--	+/++	0	0	-	--	0	0	0	0	-	--	0	--	--	0
The Briggens Estate	0	--	-	+/++	-	0	--	+/++	0	0	-	--	0	0	0	-	-	--	0	--	--	0

5.6 As explained in Chapter 4, the three MAS' identified within the Plan were assessed through the Site Selection Report (August 2018) using a different methodology. The MASs are considered appropriate for inclusion within the Plan, based on the previous site assessment work. For more information on the background to the MAS', please refer to the Spatial Strategy for Minerals (SSM) July 2022, which can be accessed via the link in paragraph 4.21.

Appraisal of Policy Options

5.7 A full appraisal of all policy options considered can be seen at Appendix 1. Figure 11 below provides a summary of the SA scores for the preferred policies (i.e. the policies that appear in the Plan) against the SA criteria. This shows the in-combination effects of all preferred policies and the collective effects of the Plan. Due to the nature of the SA scoring process (i.e. each policy must be assessed on its own, without taking into consideration the mitigation that might be provided by other policies in the Plan) some of the preferred policies score likely negligible/no effects (0) or uncertain effects (?). Many of the preferred policies score minor positive (+) or significant positive (++) effects against several criteria, indicating where the policies will deliver benefits and will contribute positively towards sustainable development.

5.8 Appendix 1 provides full commentary of the SA appraisal results for each policy and includes the following information:

- An outline of the policy options considered, including the preferred policies and reasonable alternative policy options
- Details of any proposed mitigation measures
- Explanations of why any reasonable alternative policy options have been rejected
- Justifications for selecting the preferred policies
- Tables setting out the full SA scores for each policy option considered (preferred policies and reasonable alternative policy options)

Figure 11: SA Scores for Preferred Policies

Criteria	Policy																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1.1	0	++	0	0	?/+	++	++	++	++	0	0	0	0	++	0	0	0	0	0	0	0	0	0	0	0	0	0
1.2	0	?/+	0	0	++	++	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.3	0	++	0	0	++	?/+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4	0	?/++	0	++	0	0	0	0	0	+	0	0	0	0	0	0	0	0	0	0	0	0	++	++	0	0	0
2.1	++	0	++	0	0	0	0	++	0	++	++	0	0	++	0	0	0	0	0	0	0	?	?	0	0	0	0
2.2	?/++	0	?/+	0	0	0	0	0	0	?/+	++	0	0	0	0	0	0	0	0	0	0	?/+	?	0	0	0	0
2.3	0	0	0	++	0	0	0	0	0	+	0	0	0	0	0	0	0	0	0	0	0	++	?/+	0	0	0	0
2.4	0	0	++	0	0	0	0	0	0	?/++	++	0	0	++	?	0	0	0	0	0	0	?	?	0	0	0	0
3.1	++	?/++	++	?/+	0	?/+	?/+	++	0	++	++	++	++	?/++	0	++	0	0	0	0	0	0	?/+	0	0	0	0
3.2	0	0	0	0	++	0	0	0	++	0	?	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.3	+	++	++	?/+	?/+	?/+	?/+	++	0	++	++	++	++	?/++	0	++	++	0	0	0	0	++	?	0	0	0	0
4.1	0	++	++	0	0	0	0	++	0	++	++	++	++	?/++	0	0	?/++	0	0	0	0	+	?/+	0	0	0	0
4.2	++	?	++	0	0	0	0	0	0	++	++	++	++	?	++	++	+	+	++	++	++	++	?	++	++	++	+
4.3	0	++	++	+	?/+	?/+	?/+	++	0	++	++	++	++	?/++	0	0	?/+	0	0	0	0	++	0	0	0	0	0
5.1	++	0/?	++	0	?	?	?	?	?	++	++	?	?/+	0	0	0	?	0	++	+	0	?	++	++	?/+	+	0
5.2	++	0/+	++	0	+	?	+	++	++	++	++	?	+	0	0	0	?	0	++	++	0	?	++	++	++	++	0
5.3	++	0/?	++	0	?	?	?	?	?	?/+	++	?	?	0	0	0	?	0	?/+	?	0	?/+	?	+	?/+	?	0
6.1	+	+/-	++	0	?/+	?	?	++	++	++	++	?	?	0	0	0	?	0	?/+	+	0	?	++	++	++	?/++	0
6.2	++	0	++	0	0	?	?	?	?	?/+	++	?	?	0	0	0	?	0	?	+	0	?	++	++	?	?	0
7.1	+	?/++	++	++	?	?/+	?/+	?/+	?/++	++	++	++	++	?	++	++	?	++	++	++	++	++	?/+	++	++	++	0
7.2	+	++	++	0	+	?/+	?/+	?/+	?/++	?/+	++	++	++	++	++	++	?	?/++	++	++	?	0	0	++	++	++	0
7.3	0	0	++	+	?	0	0	0	0	?/++	+	?	?/+	?	?	0	?	0	?	?/+	0	?/+	?	0	0	?	0
7.4	0	?	?	?	?	?	?	?	?	?	?	?	++	?	?	?	?	?	?	?	?	?	?	?	?	?/++	++
7.5	+	?/+	++	++	?	?/+	?/+	?/+	?/+	++	++	++	++	?/+	++	++	?	++	++	++	0	++	?/+	++	++	++	0
8.1	0	?	0/+	0	?	?	?	?	?	?	+	?/+	++	?	++	?/++	++	?/+	?	?	?	?	?	0	?	?/+	0
8.2	0	?/-	?/+	0	?/+	?	?	?	?/-	?	?/+	?	++	?	?/++	?/++	+	?/+	?	?	?	?	?	0	?	?/+	0
8.3	++	?/++	+	0	?/+	?/+	?/+	++	?	++	++	?/++	++	++	++	++	++	++	++	++	++	?	?	++	++	++	++
8.4	++	++	++	0	?/+	?/+	?/+	++	?	++	++	?/++	++	++	++	++	++	++	++	++	++	?	?	++	++	++	?
8.5	++	++	++	+	?/+	?/+	?/+	++	++	++	++	++	++	++	?/++	++	+	++	++	++	+	0	0	0	+	++	+

8.6	0	++	0/+	0	?	?	+	?	?	++	++	?	++	0	?	++	?	++	?	?	?	?	?	++	?	++	0
9.1	++	?/+	0/+	0	?	?	?	?	?	?	++	?	?	0	++	++	?	?/+	?+	++	++	++	?	0	0	++	0
9.2	0	++	0/+	0	?	?	?	?	?	?	++	++	?	0	++	?/+	?	?/+	?/+	++	++	++	?	0	0	++	0
9.3	++	?	0/+	0	?	?	?	?	?	?	++	?/++	?	0	++	?/+	?	?/+	?/+	?/++	++	?	?	0	0	++	0
9.4	++	++	0/+	0	?	?	?	?	?	?	++	++	?	0	++	?/+	?	?/+	?/+	++	++	?	?	0	0	++	0
10.1	0	++	++	0/+	+	++	++	++	++	++	+	++	++	?/++	0	0	0	0	0	0	0	++	++	0	0	0	0
10.2	0	++	++	?/+	+	++	0	++	++	++	++	++	0	?/+	0	0	0	0	0	0	0	0	+	0	0	0	0
10.3	0	++	++	++	?/+	?/+	0	++	0	++	+	++	++	?/++	0	0	0	0	?/+	?	?	++	?/+	0	0	0	0

6. Mitigation and Recommendations

6.1 Appendix 1 provides full commentary of the SA appraisal results and includes recommended mitigation measures for the preferred polices, where opportunities to strengthen or improve the policies have been identified. The recommendations and mitigations arising from the appraisal results are summarised in this chapter.

6.2 Preferred Policy 2: Meeting Sand and Gravel Needs scored a minor negative against criterion 8.2 (Protect the County's best and most versatile agricultural land). The nature of mineral extraction means that it is likely to have a negative effect on best and most versatile agricultural land (should it be permitted on such land). Whilst the policy scored negatively against this criterion, it is not considered that any mitigation is necessary as it will be provided though Policy 17: Soils and Agricultural Land.

6.3 Preferred Policy 17: Soils and Agricultural Land will be applied to proposals involving mineral extraction on best and most versatile agricultural land, and it is under this policy that matters pertaining to soils and agricultural land will be dealt with. Therefore, the negative effects identified for Preferred Policy 2 against criterion 8.2 will be sufficiently mitigated through the application of preferred Policy 17.

6.4 The appraisal of preferred Policy 9: Incidental Mineral Extraction resulted in a recommended change for preferred Policy 2: Meeting Sand and Gravel Needs.

6.5 Preferred Policy 2: Meeting Sand and Gravel Needs does not deal with applications for/include criteria under which incidental extraction could be dealt with. If no policy for Incidental extraction were to exist and reliance was placed on preferred Policy 2, there would be no mechanism within the Plan for dealing with the extraction element of applications involving incidental extraction.

6.6 It is recommended that a footnote be added to preferred Policy 2 to explain that proposals for incidental extraction will be dealt with under Policy 9: Incidental Extraction. Adding this footnote will clarify that preferred Policy 2 is not applicable to the determination of such proposals.

6.7 Preferred Policy 3: Meeting Waste Management Needs could be strengthened by including text on co-location. It is currently unclear how the policy supports this, and it is considered that there is a missed opportunity for the policy to score more positively against criterion 2.2 (Promote and support the co-location of waste management facilities). The policy could include text which explicitly encourages opportunities to co-locate waste management facilities together.

6.8 It is considered that preferred Policy 17: Soils and Agricultural Land could be strengthened by including text which encourages proposals on best and most versatile agricultural land to incorporate restoration and aftercare methods which would enable the land to retain its longer-term capability[8]. This will help to further safeguard best and most versatile agricultural land and maximise the beneficial effects of the policy. This may also allow for the policy to score more positively against criterion 8.2 (Protect the County's best and most versatile agricultural land) and 8.5 (Provide for the high quality and expedient restoration of land to an appropriate after-use).

[8] PPG Paragraph: 040 Reference ID: 27-040-20140306

7. Monitoring

7.1 A set of proposed monitoring indicators have been prepared (see Figure 12 below) to support Stage E of the Sustainability Appraisal (SA) process and to meet the requirements of Regulation 17 of the SEA Regulations, which reads as follows:

17. 1) 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.

(2) The responsible authority's monitoring arrangements may comprise or include arrangements established otherwise than for the express purpose of complying with paragraph (1).

7.2 The purpose of the proposed monitoring indicators is to measure the effectiveness of the policies in the Plan, post adoption.

7.3 Planning Practice Guidance (PPG) provides further guidance in respect to monitoring the effects of implementing an adopted Local Plan and states that details of monitoring arrangements may be included in the SA Report, the post-adoption statement or in the Local Plan itself. The monitoring results should be reported in the Local Planning Authority's Monitoring Report[9].

7.4 In line with the guidance in the PPG, the indicators will be monitored annually through the Hertfordshire Authority's Monitoring Report (AMR)[10]. In line with the requirements of Regulation 17, any unforeseen adverse effects will also be detailed within the AMR, should any be found.

7.5 It is important to ensure that the scale of intended monitoring is commensurate with the resources available to undertake it. Monitoring indicators have been developed which are appropriate to the Plan and every policy is supported by at least one indicator. It is neither necessary nor possible to monitor every aspect of each policy.

[9] PPG Paragraph: 025 Reference ID: 11-025-20140306

[10] More information on the AMR can be seen on the Hertfordshire County Council Minerals and Waste Planning webpages: https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/planning-in-hertfordshire/minerals-and-waste-planning/minerals-and-waste-planning.aspx

Figure 12: Proposed Monitoring Indicators

Policy	Target	Indicator	How Monitored	Related SA Objective
Policy 1: Climate Change	100%	Proportion of proposals for new mineral and waste management development which take account of climate change for the lifetime of the development	Register of minerals and waste planning permissions	5
Policy 2: Meeting Sand and Gravel Needs	100%	Proportion of mineral extraction development permitted on allocated sites or those which meet the criteria in Policy 2 (with the exception of borrow pits or incidental extraction).	Register of minerals planning permissions	1
	Maintain a minimum of a 7-year landbank for sand and gravel	The number of years the permitted sand and gravel reserves will provide supply	Refer to the Hertfordshire Local Aggregate Assessment for information on the landbank	1
Policy 3: Meeting Waste Management Needs	Capacity gaps closed by end of plan period (2040)	Permitted proposals for new facilities or extensions to facilities which increase waste management capacity to meet identified needs	Register of waste planning permissions	4
	100%	New waste management capacity permitted in locations compliant with Policy 3, except for applications for Water Recycling Sites	Register of waste planning permissions	4
Policy 4: Site Safeguarding and	100%	All existing minerals and waste infrastructure retained	Results of surveys or site monitoring records	1&2

Policy	Target	Indicator	How Monitored	Related SA Objective
Consultation Areas			Records of engagement with the Hertfordshire District and Borough Council's which may highlight loss or closure of facilities	
	Zero	Quantity of developments permitted in consultation areas, contrary to the advice of the MWPA	Monitoring of submitted Consultation Area Assessments	1&2
Policy 5: Mineral Safeguarding Areas	Zero	Number of applications permitted within MSA's resulting in needless sterilisation	Register of minerals planning permissions Monitoring of submitted Mineral Resource Assessments	1
Policy 6: Brick Clay	100%	Applications for brick clay extraction permitted in accordance with Policy 6	Register of minerals planning permissions	1
Policy 7: Chalk	100%	Applications for chalk extraction permitted in accordance with Policy 7	Register of minerals planning permissions	1
Policy 8: Borrow Pits	100%	Applications for Borrow Pit development permitted in accordance with Policy 8	Register of minerals planning permissions	1&3
Policy 9: Incidental Mineral Extraction	100%	Applications for Incidental Extraction development permitted in accordance with Policy 9	Register of minerals planning permissions	1

Policy	Target	Indicator	How Monitored	Related SA Objective
Policy 10: Secondary and Recycled Materials	An increase in the county's capacity to produce secondary and recycled aggregates	Number of new facilities or extensions to existing facilities which provide an increase in secondary or recycled aggregates	Register of minerals and waste planning permissions	3
	An increase in the amount of inert waste diverted from landfill	Amount of inert waste diverted from landfill	Environment Agency's Waste Data Interrogator data Monitor submitted Circular Economy Statements	3&4
Policy 11: Sustainable Design and Resource Efficiency	Major development proposals to be supported by Circular Economy Statements	Number of Circular Economy Statements received	Monitor submitted Circular Economy Statements	3&4
	100%	New waste management development (and where appropriate mineral development) to demonstrate high quality design and contribute to resource efficiency	Register of waste planning permissions	3&4
Policy 12: Landfill Excavation	100%	Applications for landfill excavation permitted in accordance with Policy 12	Register of waste planning permissions	3
Policy 13: Restoration,	100%	Applicable proposals involving restoration that demonstrate a phased approach	Register of minerals and waste planning permissions	8

Policy	Target	Indicator	How Monitored	Related SA Objective
Aftercare and After-use	100%	Applicable proposals to be supported by a Restoration Strategy and where appropriate an Aftercare Management Strategy	Register of minerals and waste planning permissions	8
Policy 14: Green Belt	100%	Permitted mineral extraction and restoration proposals to demonstrate they preserve the openness of the Green Belt throughout the lifetime of the development	Register of minerals and waste planning permissions	8
	100%	Applicable proposals (minerals related development or for new or extensions to existing waste management facilities) within the Green Belt to demonstrate very special circumstances sufficient to clearly outweigh the harm to the Green Belt, together with any other harm identified	Register of minerals and waste planning permissions	8
Policy 15: Biodiversity and Geodiversity	100%	Applicable minerals and waste developments to deliver a measurable net gain in biodiversity, in line with the latest published Biodiversity Metric	Register of minerals and waste planning permissions	8
	Zero, unless it is clearly demonstrated that the	Proposals on, adjacent to, or which may otherwise have negative impact upon sites which have been designated at a National Level	Register of minerals and waste planning permissions	8

Policy	Target	Indicator	How Monitored	Related SA Objective
	benefits of the proposals outweigh any harm			
Policy 16: Landscape and Green Infrastructure	Zero, unless exceptional circumstances can be demonstrated	Number of permitted applications for major development within or adjacent to the Chilterns Area of Outstanding Natural Beauty or which are likely to have an adverse impact on it, to be permitted	Register of minerals and waste planning permissions	8
	100%	Applicable development proposals to conserve and enhance landscape character, quality, visual amenity and green infrastructure networks, in line with the requirements of Policy 16	Register of minerals and waste planning permissions	7&8
Policy 17: Soils and Agricultural Land	100%	Proposals involving removal of soils to be accompanied by a Soils Management and Handling Strategy	Register of minerals and waste planning permissions	8
	Zero, except for where an overriding need for the development has been demonstrated and sufficient land is unavailable in lower grades	Permitted proposals that result in permanent loss of best and most versatile agricultural land	Register of minerals and waste planning permissions	8

Policy	Target	Indicator	How Monitored	Related SA Objective
Policy 18: Historic Environment	100%	Proposals directly affecting a heritage asset and/or its setting to accompanied by a Heritage Statement	Register of minerals and waste planning permissions	8
Policy 19: Protection and Enhancement of Amenity	100%	Proposals for new mineral and waste management development to demonstrate that the criteria in Policy 19 have been taken into account in decision making	Register of minerals and waste planning permissions	7
Policy 20: Health and Wellbeing	100%	Applicable minerals and waste developments to be supported by a Health Impact Assessment	Register of minerals and waste planning permissions	7
Policy 21: Water Management	Zero	New minerals and waste management development granted contrary to the advice of the Environment Agency	Register of minerals and waste planning permissions	9
	100%	New minerals and waste management development in areas known to be at risk of flooding development to be supported by a sequential test and if necessary, an exception test	Register of minerals and waste planning permissions	9
	Zero	Approved applications to adversely affect the flow and quality of ground and/or surface water resources	Register of minerals and waste planning permissions	9
Policy 22: Water Recycling Sites	100%	New or extensions to existing Water Recycling Centres to avoid land within Flood Zone 3 unless the need can be clearly demonstrated through the application of sequential and exception tests along with an assessment of the benefits of the location weighed against the risks	Register of waste planning permissions	9
	100%	Proposals for new or extensions to existing Water Recycling Centres to demonstrate that	Register of waste planning permissions	9

Policy	Target	Indicator	How Monitored	Related SA Objective
		there will be no increase in the risk of flooding to the land or property		
Policy 23: Transport Infrastructure Sites	100%	Proposals for new and extensions or improvements to existing TIS permitted only where they facilitate sustainable growth proposals as identified in the Development Plan, and/or reduce the amount of material being transported by road.	Register of minerals and waste planning permissions	6&10
Policy 24: Transport	An increase in minerals or waste developments utilising sustainable transport methods such as rail and water	New minerals and waste developments utilising sustainable transport methods such as rail and water	Register of minerals and waste planning permissions	5&6
	100%	Proposals that necessitate the need for transportation by road to be well located in relation to the primary route network	Register of minerals and waste planning permissions	5&6
Policy 25: Public Rights of Way	Zero	Proposals that adversely affect the Rights of Way network without equivalent alternative provision	Register of minerals and waste planning permissions	7
	Zero, unless clearly demonstrated that the safety of users can	Proposals that permit vehicular access to sites via Rights of Way	Register of minerals and waste planning permissions	7

Policy	Target	Indicator	How Monitored	Related SA Objective
	be adequately protected			
Policy 26: Cumulative Impacts	100%	Proposals for new mineral and waste management development to demonstrate that the criteria in Policy 26 have been taken into account	Register of minerals and waste planning permissions	5, 6, 7, 8 & 9
Policy 27: Aerodrome Safeguarding Areas	100%	Proposals presenting a bird strike hazard to be accompanied by an approved Bird management Plan	Register of minerals and waste planning permissions	7
	100%	Proposals within Aerodrome Safeguarding Areas to clearly demonstrate no unacceptable risk to aviation safety	Register of minerals and waste planning permissions	7

8. Conclusion and Next Steps

8.1 The Sustainability Appraisal (SA) for the Plan appraised the policies considered for inclusion and transposed the scores of previous site assessment work undertaken for the Mineral Allocation Sites (MAS) into the scoring system applied within this SA.

8.2 The findings of the SA for the Plan are summarised within Chapter 5 and the detailed SA findings for all policy options considered can be seen at Appendix 1.

8.3 The outcomes of the SA show that the preferred policies will bring many positive benefits. The appraisal resulted in some mitigation measures being recommended for a select few of the preferred policies. The proposed mitigation measures can be seen in Chapter 6.

8.4 A proposed set of monitoring indicators are presented within Figure 12 of this report. The monitoring indicators presented within Figure 12 will be applied at the post-adoption stage to monitor the significant effects of the Plan. The monitoring indicators will be subject to change throughout the remainder of the SA process.

8.5 Following consultation on the Plan, the Minerals and Waste Planning Authority (MWPA) will consider the feedback received and amend the Plan as appropriate. In making changes to the Plan the MWPA will also consider the proposed mitigation measures set out within Chapter 6 of this report.

8.6 As Table 1 of this report details, the next stage of plan preparation will involve the publication of the Proposed Submission Plan for consultation (in line with Regulation 19 of the 2012 Regulations) in March/April 2023. The Final SA Report will be published for consultation alongside the Proposed Submission Plan. The Final SA Report will include an appraisal of the contents of the Proposed Submission Plan and will be structured in a very similar way to this report.

Appendix 1: Appraisal of All Policy Options

Policy 1: Climate Change

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy setting a clear framework for applicants, requiring proposals to demonstrate mitigation, adaptation and resilience measures against future effects of climate change
Option 2	A more generalised policy than Option 1, which would result in applicants placing a greater reliance on National Policy to guide planning applications

Preferred Policy Option

The preferred policy is Option 1.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

2.1, 2.2, 3.1, 3.3, 4.2, 5.1, 5.2, 5.3, 6.1, 6.2, 7.1, 7.2, 7.5, 8.3, 8.4. 8.5, 9.1, 9.3 and 9.4

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 2 was rejected. Whilst Option 2 would be compliant with National Policy, it would likely provide an unclear framework for applicants and could exclude details which may help to ensure an even greater consideration of climate change minimisation and mitigation measures, such as the importance of considering the use of secondary and recycled materials as an alternative to primary material.

Justification for selection of Preferred Policy Option

The preferred policy (Option 1) provides a clear framework on climate change matters for applicants and decision makers.

SA Sub Objective[11]	Option 1	Option 2
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure		
1.1. Supply of minerals	0	0
1.2. Minimise sterilisation	0	0
1.3. Encourage prior extraction	0	0
1.4. Continued operation of minerals infrastructure	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water		
2.1. Proximity principle	++	+
2.2. Co-location	?/++	?/+
2.3. Safeguarding	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place		
3.1 Increased use of recycled and secondary aggregates	++	?
3.2. Use of virgin materials on-site	0	0
3.3. Promote re-use, recovery and recycling of waste	+	+
4. Promote and encourage sustainable waste management facilities and practices		
4.1. Oppose disposal to landfill and maximise waste recovery	0	0
4.2. Well-designed, modern and efficient facilities	++	+
4.3. Work towards waste net self-sufficiency	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures		
5.1. Reduce operational emissions	++	+
5.2. Reduce greenhouse gas emissions	++	+

[11] The Sub Objectives have been shortened within the tables in this Appendix. To see the full-length Sub Objectives, see Chapter 4

5.3. Promote energy efficiency	++	+
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water		
6.1. Reduce reliance on road freight and encourage rail or water freight	+	?/+
6.2. Encourage the use of low emission vehicles	++	+
7. Protect and positively contribute towards human health and wellbeing		
7.1. Human health and safety	+	?/+
7.2. Green and blue infrastructure, rights of way and recreation	+	+
7.3. Reduce the incidence of crime associated with waste	0	0
7.4. Operation and safety of aerodromes	0	0
7.5. Safeguard residential amenity	+	?/+
8. Protect and enhance the natural, built and historic environment		
8.1. Soil contamination and soil quality and quantity	0	0
8.2. Agricultural land	0	0
8.3. Priority habitats and species, geodiversity and biodiversity	++	+
8.4. Hertfordshire's landscapes and natural environmental assets	++	+
8.5. Restoration to an appropriate after-use	++	+
8.6. Designated and non-designated heritage assets and their setting	0	0
9. Protect against flooding and safeguard water quality and quantity		
9.1. Flooding, flood alleviation and mitigation	++	+
9.2. Quality of watercourses.	0	0
9.3. Use of water and protection from over abstraction.	++	+
9.4 Protect the quality of groundwater	++	+
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities		
10.1. Employment opportunities	0	0
10.2. Supply of materials for construction	0	0
10.3. Ensure appropriate waste infrastructure	0	0

Policy 2: Meeting Sand and Gravel Needs

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which allocates more sites than required in order to provide maintenance of a landbank of 7 years beyond the plan period
Option 2	A policy which allocates sites for development and provides a mechanism for ensuring supply in the event of non-maintenance of the landbank
Option 3	Similar to option 2, but without a specific mechanism to ensure maintenance of landbank

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.1, 1.2, 1.3, 1.4, 3.1, 3.3, 4.1, 4.3, 5.2, 7.1, 7.2, 7.5, 8.3, 8.4, 8.5, 8.6, 9.1, 9.2, 9.3, 10.1, 10.2 and 10.3

Summary of Mitigation Measures

It is recommended that a footnote be added to the policy to explain that proposals for incidental extraction will be dealt with under Policy 9: Incidental Extraction. This recommendation has arisen from the appraisal of the policy options considered for Incidental Extraction. Please see the appraisal of Policy 9: Incidental Extraction.

Other Options Considered

Option 1 was rejected. Option 1 would have resulted in a plan which identifies additional sand and gravel sites in order to ensure a landbank of seven years exits beyond the plan period. This approach could be beneficial in terms of ensuring an adequate supply exists at the end of the plan period (2040) however the Plan will be reviewed well before the end

of the plan period[12] and subsequently opportunity to review and update planned supply would be undertaken in a timely manner.

Option 3 was rejected. Option 3 does not include a specific mechanism to ensure the maintenance of landbank. Whilst this option would have been broadly suitable it is considered that Option 2 provides greater clarity and certainty on the maintenance a landbank.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) will provide for a sufficient supply of sand and gravel over the plan period to meet the county's needs. It identifies clear locations for future sand and gravel extraction (in the form of allocated sites for mineral development) and seeks to maintain a landbank of at least 7 years in accordance with the latest Local Aggregate Assessment, in line with national policy. The policy is supported by informative Site Briefs which detail site-specific considerations for the allocated sand and gravel sites, which must be demonstrated by applicants. The policy will provide a clear framework on sand and gravel extraction for applicants and decision makers.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	++	++	+
1.2. Minimise sterilisation	?/+	?/+	?/+
1.3. Encourage prior extraction	?/++	++	++
1.4. Continued operation of minerals infrastructure	?/++	?/++	?/+
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	?/++	?/++	?/+

[12] The NPPF requires that Local Plans be reviewed every 5 years

3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	++	++	+
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	++	++	++
4.2. Well-designed, modern and efficient facilities	?	?	?
4.3. Work towards waste net self-sufficiency	++	++	+
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	0/?	0/?	0/?
5.2. Reduce greenhouse gas emissions	0/+	0/+	0/+
5.3. Promote energy efficiency	0/?	0/?	0/?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	+/-	+/-	+/-
6.2. Encourage the use of low emission vehicles	0	0	0
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	?/++	?/++	?/++
7.2. Green and blue infrastructure, rights of way and recreation	++	++	++
7.3. Reduce the incidence of crime associated with waste	0	0	0
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	?/+	?/+	?/+
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?/-	?/-	?/-
8.3. Priority habitats and species, geodiversity and biodiversity	?/++	?/++	?/++
8.4. Hertfordshire's landscapes and natural environmental assets	++	++	++
8.5. Restoration to an appropriate after-use	++	++	++

8.6. Designated and non-designated heritage assets and their setting	++	++	++
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	?/+	?/+	?/+
9.2. Quality of watercourses.	?/+	++	++
9.3. Use of water and protection from over abstraction.	?	?	?
9.4 Protect the quality of groundwater	?/++	++	++
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	++	++	++
10.2. Supply of materials for construction	++	++	++
10.3. Ensure appropriate waste infrastructure	++	++	++

Policy 3: Meeting Waste Management Needs

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy that supports proposals which would increase waste management capacity where gaps are identified and guides future waste management development towards the most appropriate locations in the county
Option 2	A policy similar to Option 1, which also supports proposals for new waste management development on identified Allocated Sites
Option 3	A policy with a similar approach to Option 1 but one which does not seek to steer waste management development to specific areas, allowing for more flexibility

Preferred Policy Option

The preferred policy is Option 1.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

2.1, 2.2, 2.4, 3.1, 3.3, 4.1, 4.2, 4.3, 5.1, 5.2, 5.3, 6.1, 6.2, 7.1, 7.2, 7.3, 7.5, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 9.1, 9.2, 9.3, 9.4, 10.1, 10.2 and 10.3

Summary of Mitigation Measures

The preferred policy could be strengthened by including text on co-location. It is currently unclear how the policy supports this and as such the preferred policy has scored a '?/+' against criterion 2.2. Co-location.

It could be assumed from the policy that co-location is supported within the boundary of Waste Management Sites and the other locations listed within criteria a-c of the policy but this is not entirely clear. It is not clear how co-location would be supported where a facility is proposed adjacent an existing Waste Management Site for example. The policy could include text which explicitly encourages opportunities to co-locate waste management facilities together.

Other Options Considered

Option 2 was rejected. Option 2 includes the identification of Allocated Sites for future waste management development. Whilst this approach may be beneficial in some aspects (e.g. provides applicants with additional choice of locations for future waste management), it is considered unnecessary to identify Allocated Sites within Hertfordshire given that the capacity gaps do not necessitate the need for such an approach.

Option 3 was rejected. Option 3 does not seek to steer waste management development to specific areas. Whilst this approach could be beneficial and provide for a greater level of flexibility, it is considered that steering waste management towards specific areas is a beneficial approach for Hertfordshire and will help to ensure that waste facilities are located closer to the origin of waste where appropriate (in line with the Proximity Principle).

Justification for selection of Preferred Policy Option

The preferred policy (Option) 1 is consistent with national policy and encourages the management of waste close to its origin (where appropriate). Option 1 will provide a clear framework on future waste management development for applicants and decision makers.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	++	++	?/-
2.2. Co-location	?/+	?/+	?/-
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	++	++	?/+
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	++	++	?/+

3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	++	++	++
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	++	++	++
4.2. Well-designed, modern and efficient facilities	++	++	++
4.3. Work towards waste net self-sufficiency	++	++	++
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	++	++	++
5.2. Reduce greenhouse gas emissions	++	++	?/+/-
5.3. Promote energy efficiency	++	++	++
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	++	?/++	?/++
6.2. Encourage the use of low emission vehicles	++	++	++
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	++	++	?/++
7.2. Green and blue infrastructure, rights of way and recreation	++	++	++
7.3. Reduce the incidence of crime associated with waste	++	++	?/++
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	++	++	?/++
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	0/+	?/+	?/+
8.2. Agricultural land	?/+	?/+	?/+
8.3. Priority habitats and species, geodiversity and biodiversity	+	?/+	?/+
8.4. Hertfordshire's landscapes and natural environmental assets	++	?/++	?/++
8.5. Restoration to an appropriate after-use	++	++	++

8.6. Designated and non-designated heritage assets and their setting	0/+	?/+	?/+
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	0/+	?/+	?/+
9.2. Quality of watercourses.	0/+	?/+	?/+
9.3. Use of water and protection from over abstraction.	0/+	?/+	?/+
9.4 Protect the quality of groundwater	0/+	?/+	?/+
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	++	++	++
10.2. Supply of materials for construction	++	++	++
10.3. Ensure appropriate waste infrastructure	++	++	++

Policy 4: Site Safeguarding and Consultation Areas

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which identifies several key waste management sites, mineral extraction sites, and bulk handling transport and processing facilities for safeguarding
Option 2	Similar to Option 1 but with a separate safeguarding policy for water recycling centres with their own consultation areas
Option 3	A policy which safeguards all minerals and waste management sites, including associated infrastructure

Preferred Policy Option

The preferred policy is Option 3.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.4, 2.3, 3.1, 3.3, 4.3, 7.1, 7.3, 7.5, 8.5, 10.1, 10.2, and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Whilst this policy would result in the safeguarding of some of the key waste management sites in the county it would not provide safeguarding for all waste management sites. This approach disregards the important role some smaller sites can play in helping to meet the county's waste needs. This policy could also result in the loss of some waste management sites.

Option 2 was rejected. Option 2 separates out the safeguarding of water recycling centres from the policy. Whilst this option would result in safeguarding measures for water recycling centres, it is covered by Option 3 which safeguards all waste management sites, including Water Recycling Centres.

Justification for selection of Preferred Policy Option

The preferred policy (Option 3) will ensure that all waste management sites are safeguarded and therefore ensure greater protection for the network of waste management sites across the county (when compared to Options 1 and 2). This will help to maintain the county's capacity to manage its waste arisings and avoid the loss of existing waste infrastructure.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	?/+	?/+	++
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	+/-	+/-	++
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	?/+	?/+	?/+
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	?/+	?/+	?/+
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0

4.2. Well-designed, modern and efficient facilities	0	0	0
4.3. Work towards waste net self-sufficiency	+/-	?/ +/-	+
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	0	0	0
5.2. Reduce greenhouse gas emissions	0	0	0
5.3. Promote energy efficiency	0	0	0
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	0	0	0
6.2. Encourage the use of low emission vehicles	0	0	0
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	++	++	++
7.2. Green and blue infrastructure, rights of way and recreation	0	0	0
7.3. Reduce the incidence of crime associated with waste	?/+	?/+	+
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	++	++	++
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	0	0	0
8.2. Agricultural land	0	0	0
8.3. Priority habitats and species, geodiversity and biodiversity	0	0	0
8.4. Hertfordshire's landscapes and natural environmental assets	0	0	0
8.5. Restoration to an appropriate after-use	+	+	+
8.6. Designated and non-designated heritage assets and their setting	0	0	0
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	0	0	0
9.2. Quality of watercourses.	0	0	0

9.3. Use of water and protection from over abstraction.	0	0	0
9.4 Protect the quality of groundwater	0	0	0
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	?/+/-	?/+/-	0/+
10.2. Supply of materials for construction	?/+	?/+	?/+
10.3. Ensure appropriate waste infrastructure	?/+	?/+	++

Policy 5: Mineral Safeguarding Areas

During the production of the Plan, the following options were considered for this policy:

Option 1	A less restrictive policy which would potentially allow more development to take place within MSA's, without the need to consult the MPA
Option 2	A policy which safeguards known deposits of sand and gravel and brick clay through the use of MSA's and includes criteria which determine when the MPA must be consulted
Option 3	A more restrictive policy than Option 2, with more stringent requirements for prior extraction and for when the MPA must be consulted

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.1, 1.2, 1.3, 3.2, 3.3, 4.3, 5.2, 6.1, 7.2, 8.2, 8.3, 8.4, 8.5, 10.1, 10.2 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Option 1 could lead to greater instances of mineral sterilisation and result in less opportunistic use of mineral due to its less restrictive approach for when the council must be consulted.

Option 3 was rejected. Whilst Option 3 would ensure a high level of protection for the mineral deposits in the county, it could result in an unnecessarily high volume of consultations with the council and could result in unnecessary delays to housebuilding and other forms of development.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is compliant with national policy and will ensure adequate protection and consideration of the mineral deposits (sand and gravel and brick clay) within the county. It will provide a clear framework for when consultation with the council is required and will provide clear instruction on what information is to be included within Mineral Resource Assessments.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	?/+	?/+	?/+
1.2. Minimise sterilisation	-	++	++
1.3. Encourage prior extraction	-	++	++
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	0	0	0
3.2. Use of virgin materials on-site	-	++	++
3.3. Promote re-use, recovery and recycling of waste	?/ +/-	?/+	?/+
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0
4.2. Well-designed, modern and efficient facilities	0	0	0
4.3. Work towards waste net self-sufficiency	?/ +/-	?/+	?/+

5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	?	?	?
5.2. Reduce greenhouse gas emissions	?/ +/-	+	+
5.3. Promote energy efficiency	?	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	?/ +/-	?/+	?/+
6.2. Encourage the use of low emission vehicles	0	0	0
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	?	?	?
7.2. Green and blue infrastructure, rights of way and recreation	?/ +/-	+	+
7.3. Reduce the incidence of crime associated with waste	?	?	?
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	?	?	?
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?	?/+	?/+
8.3. Priority habitats and species, geodiversity and biodiversity	?	?/+	?/+
8.4. Hertfordshire's landscapes and natural environmental assets	?	?/+	?/+
8.5. Restoration to an appropriate after-use	?	?/+	?/+
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	?	?	?
9.2. Quality of watercourses.	?	?	?
9.3. Use of water and protection from over abstraction.	?	?	?
9.4 Protect the quality of groundwater	?	?	?

10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	?/-	+	+
10.2. Supply of materials for construction	?/-	+	+
10.3. Ensure appropriate waste infrastructure	?	?/+	?/+

Policy 6: Brick Clay

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which supports proposals for brick clay workings where it is demonstrated that the brick clay reserve are below 25 years
Option 2	A policy similar to Option 1, but which does not restrict new sites for brick clay extraction being permitted where a 25-year reserve of brick clay is already being met

Preferred Policy Option

The preferred policy is Option 1.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.1, 1.2, 1.3, 3.1, 3.3, 4.3, 7.1, 7.2, 7.5, 8.3, 8.4, 8.5, 10.1, 10.2 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 2 was rejected. Whilst Option 2 supports proposals for brick clay workings and would help to ensure that a sufficient supply of this mineral is available, it also has the potential to result in over-supply. It is likely that an over-supply of clay could result in the reserve supplying brickworks further afield. This could result in a greater number of vehicle movements and subsequently a greater level of vehicle emissions/operational emissions.

Justification for selection of Preferred Policy Option

The preferred policy (Option 1) is compliant with national policy and will provide support for brick clay extraction where the existing reserve is under 25 years for specific brickworks.

The preferred policy provides a clear framework on brick clay extraction for applicants and decision makers.

SA Sub Objective	Option 1	Option 2
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure		
1.1. Supply of minerals	++	++
1.2. Minimise sterilisation	++	++
1.3. Encourage prior extraction	?/+	?/+
1.4. Continued operation of minerals infrastructure	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water		
2.1. Proximity principle	0	0
2.2. Co-location	0	0
2.3. Safeguarding	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place		
3.1 Increased use of recycled and secondary aggregates	?/+	?+
3.2. Use of virgin materials on-site	0	0
3.3. Promote re-use, recovery and recycling of waste	?/+	?/+
4. Promote and encourage sustainable waste management facilities and practices		
4.1. Oppose disposal to landfill and maximise waste recovery	0	0
4.2. Well-designed, modern and efficient facilities	0	0
4.3. Work towards waste net self-sufficiency	?/+	?+
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures		
5.1. Reduce operational emissions	?	?
5.2. Reduce greenhouse gas emissions	?	?
5.3. Promote energy efficiency	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water		

6.1. Reduce reliance on road freight and encourage rail or water freight	?	?
6.2. Encourage the use of low emission vehicles	?	?
7. Protect and positively contribute towards human health and wellbeing		
7.1. Human health and safety	?/+	?
7.2. Green and blue infrastructure, rights of way and recreation	?/+	?/+
7.3. Reduce the incidence of crime associated with waste	0	0
7.4. Operation and safety of aerodromes	?	?
7.5. Safeguard residential amenity	?/+	?
8. Protect and enhance the natural, built and historic environment		
8.1. Soil contamination and soil quality and quantity	?	?
8.2. Agricultural land	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	?/+	?/+
8.4. Hertfordshire's landscapes and natural environmental assets	?/+	?/+
8.5. Restoration to an appropriate after-use	?/+	?/+
8.6. Designated and non-designated heritage assets and their setting	?	?
9. Protect against flooding and safeguard water quality and quantity		
9.1. Flooding, flood alleviation and mitigation	?	?
9.2. Quality of watercourses.	?	?
9.3. Use of water and protection from over abstraction.	?	?
9.4 Protect the quality of groundwater	?	?
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities		
10.1. Employment opportunities	++	++
10.2. Supply of materials for construction	++	++
10.3. Ensure appropriate waste infrastructure	?/+	?/+

Policy 7: Chalk

During the production of the Plan, the following options were considered for this policy:

Option 1	No policy relating to chalk extraction
Option 2	A policy which supports proposals for chalk extraction where the need for additional chalk supply for agricultural use can be demonstrated
Option 3	A policy which supports chalk extraction but does not limit it to agricultural use

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.1, 3.1, 3.3, 4.3, 5.2, 7.1, 7.2, 7.5, 8.3, 8.4, 8.5, 8.6 and 10.1

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Chalk is extracted in Hertfordshire at a low rate and is used for agricultural purposes only. Option 1 would not provide a clear framework for applicants in considering the specific requirements for chalk extraction in Hertfordshire and could result in applications which seek to extract chalk for other uses.

Option 3 was rejected. Chalk is extracted in Hertfordshire at a low rate and is used for agricultural purposes only. If chalk were to be extracted for other uses, it would likely result in vehicles crossing the county boundary to the point of demand (i.e. to reach the destination outside of the county where it is required).

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) will ensure that an appropriate amount of chalk is supplied and for agricultural purposes only. It provides a clear framework on chalk extraction for applicants and decision makers.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	?/+	++	++
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	?/+	?/+	?/+
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	?/+	?/+	?/+
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0
4.2. Well-designed, modern and efficient facilities	0	0	0
4.3. Work towards waste net self-sufficiency	?/+	?/+	?/+
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			

5.1. Reduce operational emissions	?	?	?
5.2. Reduce greenhouse gas emissions	-	+	-
5.3. Promote energy efficiency	?	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	?	?	?
6.2. Encourage the use of low emission vehicles	?	?	?
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	?	?/+	?
7.2. Green and blue infrastructure, rights of way and recreation	?/+	?/+	?/+
7.3. Reduce the incidence of crime associated with waste	0	0	0
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	?	?/+	?
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	?/+	?/+	?/+
8.4. Hertfordshire's landscapes and natural environmental assets	?/+	?/+	?/+
8.5. Restoration to an appropriate after-use	?	?/+	?/+
8.6. Designated and non-designated heritage assets and their setting	?	+	+
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	?	?	?
9.2. Quality of watercourses.	?	?	?
9.3. Use of water and protection from over abstraction.	?	?	?
9.4 Protect the quality of groundwater	?	?	?
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			

10.1. Employment opportunities	+	++	++
10.2. Supply of materials for construction	?/+	0	++
10.3. Ensure appropriate waste infrastructure	0	0	0

Policy 8: Borrow Pits

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy allowing borrow pits which are tied to a named scheme and scheme duration
Option 2	Have no specific borrow pit policy and instead rely on other policies in the plan
Option 3	A similar policy to Option 1, which allows for borrow pits under more flexible circumstances

Preferred Policy Option

The preferred policy is Option 1.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.1, 2.1, 3.1, 3.3, 4.1, 4.3, 5.2, 6.1, 7.1, 7.2, 7.5, 8.3, 8.4, 8.5, 10.1, 10.2 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 2 was rejected. Option 2 would not provide any specific criteria for the conditions under which borrow pits should be permitted, including conditions relating to location. Option 2 requires a reliance on other policies in the Plan. The preferred policy for meeting sand and gravel needs (Policy 2, Option 2) does not deal with applications for/include criteria under which borrow pits could be dealt with.

Option 3 was rejected. Whilst this option would help to guide borrow pits in a more positive way than Option 2, it may result in a less sustainable approach for borrow pit development

due to its flexible criteria. Allowing borrow pits under more flexible circumstances could have negative implications for many areas such as road traffic movements or amenity.

Justification for selection of Preferred Policy Option

The preferred policy (Option 1) provides a clear framework for borrow pit development. It sets out clear circumstances under which borrow pit development will be supported and provides a more sustainable approach than Options 2 and 3.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	++	+	++
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	++	+	?/+
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	++	++	?/+
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	++	++	+
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	++	++	+
4.2. Well-designed, modern and efficient facilities	0	0	0
4.3. Work towards waste net self-sufficiency	++	++	+

5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	?	?	?
5.2. Reduce greenhouse gas emissions	++	?/+	?/+
5.3. Promote energy efficiency	?	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	++	++	?/++
6.2. Encourage the use of low emission vehicles	?	?	?
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	?/+	?/+	?
7.2. Green and blue infrastructure, rights of way and recreation	?/+	?/+	?
7.3. Reduce the incidence of crime associated with waste	0	0	0
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	?/+	?/+	?
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	++	++	?/+
8.4. Hertfordshire's landscapes and natural environmental assets	++	++	+
8.5. Restoration to an appropriate after-use	++	++	+
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	?	?	?
9.2. Quality of watercourses.	?	?	?
9.3. Use of water and protection from over abstraction.	?	?	?
9.4 Protect the quality of groundwater	?	?	?

10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	++	++	++
10.2. Supply of materials for construction	++	++	+
10.3. Ensure appropriate waste infrastructure	++	++	+

Policy 9: Incidental Mineral Extraction

During the production of the Plan, the following options were considered for this policy:

Option 1	No Policy. Rely on National Policy together with any other relevant policies in the development plan
Option 2	A policy for dealing with applications for incidental mineral extraction, with criteria relating to the need and sustainable use of the mineral
Option 3	A policy similar to Option 2, with more flexible criteria

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.1, 3.2, 5.2, 6.1, 7.1, 7.2, 7.5, 8.5, 10.1 and 10.2

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Option 1 would not provide any specific criteria for the conditions under which incidental extraction should be permitted. Option 1 requires a reliance on national policy and other policies in the development plan.

The preferred policy for meeting sand and gravel needs (Policy 2, Option 2) does not deal with applications for/include criteria under which incidental extraction could be dealt with and therefore there would be no relevant policy to deal with the extraction element of applications involving incidental extraction.

The preferred policy for meeting sand and gravel needs states that proposals for sand and gravel extraction outside of the allocated mineral sites will only be supported where they are required to maintain a shortfall in the council's landbank. Due to the nature of incidental extraction, it may not always/in most cases will not meet this requirement.

Option 3 was rejected. Whilst Option 3 could provide a suitable alternative policy and would provide criteria under which applications for incidental extraction would be determined, it is considered that a more restrictive policy is required to provide for better controlled management of the extracted minerals.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) provides appropriate criteria under which applications for Incidental Extract will be dealt with. It will provide a clearer framework for applicants and decision makers when compared to Options 1 and 3.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	+	++	++
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	0	0	0
3.2. Use of virgin materials on-site	?/+	++	?/+
3.3. Promote re-use, recovery and recycling of waste	0	0	0
4. Promote and encourage sustainable waste management facilities and practices			

4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0
4.2. Well-designed, modern and efficient facilities	0	0	0
4.3. Work towards waste net self-sufficiency	0	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	?	?	?
5.2. Reduce greenhouse gas emissions	?/+	++	?/+
5.3. Promote energy efficiency	?	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	?/+	++	?/+
6.2. Encourage the use of low emission vehicles	?	?	?
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	?/+	?/++	?/+
7.2. Green and blue infrastructure, rights of way and recreation	?/+	?/++	?/+
7.3. Reduce the incidence of crime associated with waste	0	0	0
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	?/+	?/+	?/+
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?/-	?/-	?/-
8.3. Priority habitats and species, geodiversity and biodiversity	?	?	?
8.4. Hertfordshire's landscapes and natural environmental assets	?	?	?
8.5. Restoration to an appropriate after-use	+	++	+
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			

9.1. Flooding, flood alleviation and mitigation	?	?	?
9.2. Quality of watercourses.	?	?	?
9.3. Use of water and protection from over abstraction.	?	?	?
9.4 Protect the quality of groundwater	?	?	?
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	++	++	++
10.2. Supply of materials for construction	+	++	+
10.3. Ensure appropriate waste infrastructure	0	0	0

Policy 10: Secondary and Recycled Materials

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which supports the increased use of secondary and recycled materials and supports the expansion of existing and the provision of new facilities to increase capacity for the processing and distribution of these materials
Option 2	A similar policy to Option 1 but which would also identify specific allocated sites for the provision of facilities to process and distribute secondary and recycles aggregates
Option 3	A policy similar to Option 1 but which doesn't prioritise the use of recycled inert material for specific uses

Preferred Policy Option

The preferred policy is Option 1.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.4, 2.1, 2.2, 2.3, 2.4, 3.1, 3.3, 4.1, 4.2, 4.3, 5.1, 5.2, 5.3, 6.1, 6.2, 7.1, 7.2, 7.3, 7.5, 8.3, 8.4, 8.5, 8.6, 10.1, 10.2 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 2 was rejected. It is not considered necessary for specific allocated sites of this nature to be identified within the Plan. The allocated mineral sites in the Plan will provide capacity for the management of inert waste and that capacity will increase over the plan period, as the mineral sites come forward/are worked. Also, other policies in the Plan (e.g. Policy 11: Sustainable Design and Resource Efficiency) will help to reduce the amount of

inert waste requiring management, by encouraging greater use and recycling of such waste on-site in construction projects.

Option 3 was rejected. Option 3 would provide less certainty for the management of inert waste in the county by not prioritising its use. This could have negative implications such as undermining the availability of such waste for use in mineral restoration schemes and could result in the management of inert waste lower down the waste hierarchy.

Justification for selection of Preferred Policy Option

The preferred policy (Option 1) is compliant with national policy and will provide a clear framework for applicants and decision makers. It will help to guide the management of inert waste up the waste hierarchy and also support the expansion of existing and the provision of new facilities to increase the capacity for processing, distribution and where necessary the re-processing of aggregates. It is the most appropriate option for Hertfordshire and scores more favourably when compared to Options 2 and 3.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	+	+	+
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	++	?/++	++
2.2. Co-location	?/+	?/+	?/+
2.3. Safeguarding	+	+	+
2.4. Priority to the re-use of brownfield and employment land	?/++	?/++	?/++
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	++	++	++
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	++	++	+

4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	++	++	+/-
4.2. Well-designed, modern and efficient facilities	++	++	++
4.3. Work towards waste net self-sufficiency	++	++	+
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	++	++	+
5.2. Reduce greenhouse gas emissions	++	++	+
5.3. Promote energy efficiency	?/+	?/+	?/+
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	++	++	?/+
6.2. Encourage the use of low emission vehicles	?/+	?/+	?/+
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	++	?/++	?/+
7.2. Green and blue infrastructure, rights of way and recreation	?/+	?/+	?/+
7.3. Reduce the incidence of crime associated with waste	?/++	?/+	?/+
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	++	?/++	?/+
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	++	?/++	?/+
8.4. Hertfordshire's landscapes and natural environmental assets	++	?/++	?/+
8.5. Restoration to an appropriate after-use	++	++	++
8.6. Designated and non-designated heritage assets and their setting	++	?/ ++	?/+
9. Protect against flooding and safeguard water quality and quantity			

9.1. Flooding, flood alleviation and mitigation	?	?	?
9.2. Quality of watercourses.	?	?	?
9.3. Use of water and protection from over abstraction.	?	?	?
9.4 Protect the quality of groundwater	?	?	?
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	++	++	++
10.2. Supply of materials for construction	++	++	+
10.3. Ensure appropriate waste infrastructure	++	++	+

Policy 11: Sustainable Design and Resource Efficiency

During the production of the Plan, the following options were considered for this policy:

Option 1	A Policy requiring proposals to address design and resource efficiency, supported by Design Guidance but no Circular Economy requirements
Option 2	A less detailed Policy than Option 1 which is not supported by Design Guidance or with Circular Economy requirements
Option 3	A Policy requiring proposals to address design and resource efficiency, supported by Design Guidance and requiring Circular Economy Statement for Major developments

Preferred Policy Option

The preferred policy is Option 3.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

2.1, 2.2, 2.4, 3.1, 3.3, 4.1, 4.2, 4.3, 5.1, 5.2, 5.3, 6.1, 6.2, 7.1, 7.2, 7.3, 7.5, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 9.1, 9.3, 9.3, 9.4, 10.1, 10.2 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. By not requiring Circular Economy Statements, Option 1 could result in greater quantities of inert waste arising from construction projects. It could result in less recycling and reuse of inert construction waste on-site and subsequently result in the management of inert waste closer to the bottom of the waste hierarchy.

Option 2 was rejected. Option 2 could result in the same negative implications for inert construction waste as outlined for Option 1 above. It could also result in waste management facilities which are not as well designed or well suited/adapted to their surrounding environments as they could be.

Justification for selection of Preferred Policy Option

The preferred policy (Option 3) has far greater benefits than Options 1 and 2 and provides a clear framework for applicants and decision makers. It is the most sustainable option and will help to move the management of waste up the waste hierarchy.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	++	?/+	++
2.2. Co-location	++	?/+	++
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	++	?/+	++
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	+	?/+	++
3.2. Use of virgin materials on-site	?	?	?
3.3. Promote re-use, recovery and recycling of waste	+/+/-	+/-	++
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	+	+/-	++
4.2. Well-designed, modern and efficient facilities	++	+/-	++

4.3. Work towards waste net self-sufficiency	+	+/-	++
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	+	+/-	++
5.2. Reduce greenhouse gas emissions	+	+/-	++
5.3. Promote energy efficiency	++	+/-	++
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	+	+/-	++
6.2. Encourage the use of low emission vehicles	++	+/-	++
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	++	?/+	++
7.2. Green and blue infrastructure, rights of way and recreation	++	?/+	++
7.3. Reduce the incidence of crime associated with waste	+	?/+	+
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	++	?/+	++
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	+	?	+
8.2. Agricultural land	?/+	?	?/+
8.3. Priority habitats and species, geodiversity and biodiversity	++	?/+	++
8.4. Hertfordshire's landscapes and natural environmental assets	++	?/+	++
8.5. Restoration to an appropriate after-use	++	?/+	++
8.6. Designated and non-designated heritage assets and their setting	++	?	++
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	++	?	++
9.2. Quality of watercourses.	++	?	++
9.3. Use of water and protection from over abstraction.	++	?	++

9.4 Protect the quality of groundwater	++	?	++
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	+	+	+
10.2. Supply of materials for construction	+	?/+	++
10.3. Ensure appropriate waste infrastructure	+	?/+	+

Policy 12: Landfill Excavation

During the production of the Plan, the following options were considered for this policy:

Option 1	A criteria-based policy to deal with proposals for landfill excavation and re-restoration
Option 2	A more restrictive policy, which restricts landfill excavation to the purposes of safeguarding human health and the environment only
Option 3	A policy which is less restrictive, allowing for example the disposal of excavated waste into other landfill

Preferred Policy Option

The preferred policy is Option 1.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

3.1, 3.3, 4.1, 4.2, 4.3, 7.1, 7.2, 7.5, 8.1, 8.3, 8.4, 8.5, 9.2, 9.3, 9.4, 10.1,10.2 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 2 was rejected. Option 2 provides less opportunity for the re-use, recycling & recovery of previously landfilled waste by restricting excavation to certain scenarios only (for the purposes of safeguarding human health and the environment).

Option 3 was rejected. Option 3 could result landfill excavation that is not as beneficial as it could be in terms of maximising benefits from the excavated waste. It is important that the value of the resources extracted are maximised as far as possible and this includes moving waste as high up the waste hierarchy as possible. It would not be in keeping with the waste hierarchy or circular economy principles if the policy did not try to limit the disposal of excavated waste into another landfill.

Justification for selection of Preferred Policy Option

Option 1 provides a clear framework for applicants and decision makers on where landfill excavation will be supported in principle. Option 1 scores the most positively and seeks to maximise waste recovery and move waste up the waste hierarchy.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	++	+	+/-
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	++	+	+/-
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	++	++	+/-
4.2. Well-designed, modern and efficient facilities	++	++	++
4.3. Work towards waste net self-sufficiency	++	++	+/-
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			

5.1. Reduce operational emissions	?	?	?
5.2. Reduce greenhouse gas emissions	?	?	?
5.3. Promote energy efficiency	?	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	?	?	?
6.2. Encourage the use of low emission vehicles	?	?	?
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	++	++	+
7.2. Green and blue infrastructure, rights of way and recreation	++	++	++
7.3. Reduce the incidence of crime associated with waste	?	?	?
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	++	++	+
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?/+	?/+	?/+
8.2. Agricultural land	?	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	?/++	?/++	?/++
8.4. Hertfordshire's landscapes and natural environmental assets	?/++	?/++	?/++
8.5. Restoration to an appropriate after-use	++	++	++
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	?	?	?
9.2. Quality of watercourses.	++	++	+
9.3. Use of water and protection from over abstraction.	?/++	?/++	+
9.4 Protect the quality of groundwater	++	++	+
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			

10.1. Employment opportunities	++	+	++
10.2. Supply of materials for construction	++	+	+/-
10.3. Ensure appropriate waste infrastructure	++	++	++

Policy 13: Restoration, Aftercare and After-use

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which promotes restoration in a timely manner, using sustainable materials and which provides criteria for proposed after-use
Option 2	A less restrictive policy with minimal after-use requirements

Preferred Policy Option

The preferred policy is Option 1.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

3.1, 3.3, 4.1, 4.2, 4.3, 5.1, 5.2, 7.1, 7.2, 7.3, 7.4, 7.5, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 10.1 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 2 was rejected. By having minimal after-use requirements, Option 2 could result in negative implications to the landscape and surrounding environment, and it is considered that a more stringent policy like Option 1 is necessary. Option 2 could result in landforms which are restored to a less beneficial after-use/ an after-use which does not accord with nor compliment the surrounding area.

Justification for selection of Preferred Policy Option

The preferred policy (Option 1) provides a clear framework for applicants and decision makers on the requirements for restoration, aftercare and after use. Option 1 scores much

more favourably than Option 2 against several criteria, particularly the criteria under Objective 8: Protect and enhance the natural, built and historic environment.

SA Sub Objective	Option 1	Option 2
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure		
1.1. Supply of minerals	0	0
1.2. Minimise sterilisation	0	0
1.3. Encourage prior extraction	0	0
1.4. Continued operation of minerals infrastructure	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water		
2.1. Proximity principle	0	0
2.2. Co-location	0	0
2.3. Safeguarding	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place		
3.1 Increased use of recycled and secondary aggregates	++	+
3.2. Use of virgin materials on-site	0	0
3.3. Promote re-use, recovery and recycling of waste	++	+
4. Promote and encourage sustainable waste management facilities and practices		
4.1. Oppose disposal to landfill and maximise waste recovery	++	+
4.2. Well-designed, modern and efficient facilities	++	?/+
4.3. Work towards waste net self-sufficiency	++	+
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures		
5.1. Reduce operational emissions	?/+	?/+
5.2. Reduce greenhouse gas emissions	+	+
5.3. Promote energy efficiency	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water		

6.1. Reduce reliance on road freight and encourage rail or water freight	?	?
6.2. Encourage the use of low emission vehicles	?	?
7. Protect and positively contribute towards human health and wellbeing		
7.1. Human health and safety	++	+
7.2. Green and blue infrastructure, rights of way and recreation	++	?/ +/-
7.3. Reduce the incidence of crime associated with waste	?/+	?/+
7.4. Operation and safety of aerodromes	++	+
7.5. Safeguard residential amenity	++	+/-
8. Protect and enhance the natural, built and historic environment		
8.1. Soil contamination and soil quality and quantity	++	?/+/-
8.2. Agricultural land	++	?/+/-
8.3. Priority habitats and species, geodiversity and biodiversity	++	?/+/-
8.4. Hertfordshire's landscapes and natural environmental assets	++	?/+/-
8.5. Restoration to an appropriate after-use	++	?/+/-
8.6. Designated and non-designated heritage assets and their setting	++	?/+/-
9. Protect against flooding and safeguard water quality and quantity		
9.1. Flooding, flood alleviation and mitigation	?	?
9.2. Quality of watercourses.	?	?
9.3. Use of water and protection from over abstraction.	?	?
9.4 Protect the quality of groundwater	?	?
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities		
10.1. Employment opportunities	++	++
10.2. Supply of materials for construction	0	0
10.3. Ensure appropriate waste infrastructure	++	+

Policy 14: Green Belt

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which supports mineral extraction in principle whilst ensuring the openness of the Green Belt is protected. Other development must demonstrate very special circumstances
Option 2	A similar policy to Option 1 but which provides detailed criteria which must be taken into account as material considerations
Option 3	A similar policy to Option 2, but which is more restrictive, requiring all forms of development to demonstrate very special circumstances

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.1, 2.1, 2.4, 3.1, 3.3, 4.1, 4.3, 7.2, 7.5, 8.3, 8.4, 8.5, 10.1, 10.2 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Whilst Option 1 would provide an appropriate framework for dealing with applications in the Green Belt it is considered that the detailed criteria within Option 2 make it a more suitable policy that Option 1.

Option 3 was rejected. National policy states that mineral extraction is not inappropriate in the Green Belt provided it preserves its openness and does not conflict with the purposes of including land within it. Option 3 could result in applications for mineral extraction having to demonstrate very special circumstances where it is not a necessary requirement.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is consistent with national policy and provides a clear framework for applicants and decision makers on the requirements for developments in the Green Belt.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	++	++	?/+
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	++	++	++
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	+	++	++
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	?/+	?/++	?+
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	?/+	?/++	?/+
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	?/+	?/++	?/+
4.2. Well-designed, modern and efficient facilities	?	?	?
4.3. Work towards waste net self-sufficiency	?/+	?/++	?/+
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			

5.1. Reduce operational emissions	0	0	0
5.2. Reduce greenhouse gas emissions	0	0	0
5.3. Promote energy efficiency	0	0	0
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	0	0	0
6.2. Encourage the use of low emission vehicles	0	0	0
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	?	?	?
7.2. Green and blue infrastructure, rights of way and recreation	+	++	+
7.3. Reduce the incidence of crime associated with waste	?	?	?
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	?/+	?/+	?/+
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	+	++	+
8.4. Hertfordshire's landscapes and natural environmental assets	+	++	+
8.5. Restoration to an appropriate after-use	++	++	+
8.6. Designated and non-designated heritage assets and their setting	0	0	0
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	0	0	0
9.2. Quality of watercourses.	0	0	0
9.3. Use of water and protection from over abstraction.	0	0	0
9.4 Protect the quality of groundwater	0	0	0
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			

10.1. Employment opportunities	?/+	?/++	?/+
10.2. Supply of materials for construction	?/+	?/+	?/+
10.3. Ensure appropriate waste infrastructure	?/+	?/++	?/+

Policy 15: Biodiversity and Geodiversity

During the production of the Plan, the following options were considered for this policy:

Option 1	Include a detailed criteria-based policy, consistent with national policy
Option 2	A similar policy to Option 1, with less restrictive criteria
Option 3	A policy similar to Option 1 but which sets out the hierarchy of sites and affords different levels of protection to each

Preferred Policy Option

The preferred policy is Option 3.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

4.2, 7.1, 7.2, 7.5, 8.1, 8.2, 8.3, 8.4, 8.5, 9.1, 9.2, 9.3 and 9.4

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Whilst this policy would afford appropriate protection to biodiversity and geodiversity, Option 3 scored more favourably by distinguishing the hierarchy of sites and setting out the different levels of protection afforded to each.

Option 2 was rejected. The less restrictive criteria included within this option resulted in it scoring less favourably when compared to the other two options considered.

Justification for selection of Preferred Policy Option

The preferred policy (Option 3) is consistent with national policy and provides a clear framework for applicants and decision makers. Option 3 scored most favourably out of the options considered and will afford an appropriate level of protection to the statutory and non-statutory designated biodiversity sites that could be affected by minerals and waste development in Hertfordshire.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	?	?	?
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	0	0	0
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	0	0	0
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0
4.2. Well-designed, modern and efficient facilities	+	+	++
4.3. Work towards waste net self-sufficiency	0	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			

5.1. Reduce operational emissions	0	0	0
5.2. Reduce greenhouse gas emissions	0	0	0
5.3. Promote energy efficiency	0	0	0
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	0	0	0
6.2. Encourage the use of low emission vehicles	0	0	0
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	+	?/+	++
7.2. Green and blue infrastructure, rights of way and recreation	+	?/+	++
7.3. Reduce the incidence of crime associated with waste	?	?	?
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	+	?/+	++
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	+	?/+	++
8.2. Agricultural land	?/+	?/+	?/++
8.3. Priority habitats and species, geodiversity and biodiversity	+	?/+	++
8.4. Hertfordshire's landscapes and natural environmental assets	+	?/+	++
8.5. Restoration to an appropriate after-use	?/+	?/+	?/++
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	+	?/+	++
9.2. Quality of watercourses.	+	?/+	++
9.3. Use of water and protection from over abstraction.	+	?/+	++
9.4 Protect the quality of groundwater	+	?/+	++
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			

10.1. Employment opportunities	0	0	0
10.2. Supply of materials for construction	0	0	0
10.3. Ensure appropriate waste infrastructure	0	0	0

Policy 16: Landscape and Green Infrastructure

During the production of the Plan, the following options were considered for this policy:

Option 1	A criteria-based policy consistent with national policy, which includes the requirement for proposals to be supported by either a Landscape and Visual Impact Assessment or a Landscape Visual Appraisal
Option 2	A policy similar to Option 1 but which provides greater protection for the Chilterns AONB
Option 3	A less restrictive policy, requiring consideration only of general criteria relating to visual and other effects

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

3.1, 3.3, 4.2, 7.1, 7.2, 7.5, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 9.1, 9.2, 9.3 and 9.4

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Whilst Option 1 could be considered a suitable option and is compliant with national policy, the preferred policy (Option 2) scores slightly better due to the additional protection it affords to the Chilterns AONB.

Option 3 was rejected. A less restrictive policy with only of general criteria could miss out details which help to capture specific considerations relevant to Hertfordshire (such as the Chilterns AONB). It could also result in superficial/less detailed consideration given to landscape and green infrastructure assets.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is consistent with national policy and provides a clear framework for applicants and decision makers. Option 2 scored most favourably out of the options considered and will afford an appropriate level of protection to the landscape and green infrastructure assets in Hertfordshire.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	++	++	+
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	++	++	+
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0
4.2. Well-designed, modern and efficient facilities	++	++	?/+
4.3. Work towards waste net self-sufficiency	0	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			

5.1. Reduce operational emissions	0	0	0
5.2. Reduce greenhouse gas emissions	0	0	0
5.3. Promote energy efficiency	0	0	0
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	0	0	0
6.2. Encourage the use of low emission vehicles	0	0	0
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	++	++	+
7.2. Green and blue infrastructure, rights of way and recreation	++	++	+
7.3. Reduce the incidence of crime associated with waste	0	0	0
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	++	++	+
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?/++	?/++	?/+
8.2. Agricultural land	?/++	?/++	?/+
8.3. Priority habitats and species, geodiversity and biodiversity	++	++	+
8.4. Hertfordshire's landscapes and natural environmental assets	+	++	+
8.5. Restoration to an appropriate after-use	++	++	+
8.6. Designated and non-designated heritage assets and their setting	++	++	+
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	++	++	?/+
9.2. Quality of watercourses.	?/+	?/+	?/+
9.3. Use of water and protection from over abstraction.	?/+	?/+	?/+
9.4 Protect the quality of groundwater	?/+	?/+	?/+
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			

10.1. Employment opportunities	0	0	0
10.2. Supply of materials for construction	0	0	0
10.3. Ensure appropriate waste infrastructure	0	0	0

Policy 17: Soils and Agricultural Land

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which requires consideration to be had to soils and which seeks to protect best and most versatile land
Option 2	A policy similar to Option 1 but which requires a Soils Management and Handling Strategy
Option 3	A more restrictive policy than Option 2 which requires all development on agricultural land to be returned back to agricultural use

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

3.3, 4.1, 4.2, 4.3, 8.1, 8.2, 8.3, 8.4 and 8.5

Summary of Mitigation Measures

It is considered that the preferred policy (Option 2) could be strengthened by including text which encourages proposals on best and most versatile agricultural land to incorporate restoration and aftercare methods which would enable the land to retain its longer-term capability[13]. This will help to further safeguard best and most versatile agricultural land and maximise the beneficial effects of the policy.

Other Options Considered

Option 1 was rejected. Whilst Option 1 would afford some level of protection to soils in line with national policy, it is not considered as robust as the preferred policy (Option 2), which includes a requirement for a Soils Management and Handling Strategy.

[13] See PPG Paragraph: 040 Reference ID: 27-040-20140306

Option 3 was rejected. Whilst Option 3 would afford a high level of protection to agricultural land and soils it will restrict after-use options. This could result in missed opportunities for alternative after-uses which could provide enhancements to the landscape and amenity of the local area (e.g., creation of country park).

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is compliant with national policy and affords a high level of protection to soils and agricultural land. The preferred policy scored most favourably out of the options considered and will provide a clear framework for applicants and decision makers.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	0	0	0
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	+	++	++
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	?/+	?/++	?/++
4.2. Well-designed, modern and efficient facilities	?/+	+	+

4.3. Work towards waste net self-sufficiency	?/+	?/+	?/+
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	?	?	?
5.2. Reduce greenhouse gas emissions	?	?	?
5.3. Promote energy efficiency	?	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	?	?	?
6.2. Encourage the use of low emission vehicles	?	?	?
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	?	?	?
7.2. Green and blue infrastructure, rights of way and recreation	?	?	-
7.3. Reduce the incidence of crime associated with waste	?	?	?
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	?	?	?
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	+	++	++
8.2. Agricultural land	+	+	++
8.3. Priority habitats and species, geodiversity and biodiversity	+	++	++
8.4. Hertfordshire's landscapes and natural environmental assets	++	++	++
8.5. Restoration to an appropriate after-use	+	+	+
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	?	?	?
9.2. Quality of watercourses.	?	?	?
9.3. Use of water and protection from over abstraction.	?	?	?

9.4 Protect the quality of groundwater	?	?	?
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	0	0	0
10.2. Supply of materials for construction	0	0	0
10.3. Ensure appropriate waste infrastructure	0	0	0

Policy 18: Historic Environment

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which supports proposals where it can be demonstrated that they will protect, conserve and, where appropriate, enhance the historic environment, requiring an assessment of impact
Option 2	Similar to Option 1 but with the requirement of a full Heritage Statement and where necessary, archaeological investigations
Option 3	A similar policy to Option 1, with less restrictive considerations required of the historic environment

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

4.2, 7.1, 7.2, 7.5, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 9.1, 9.2, 9.3 and 9.4

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Whilst Option 1 would afford protection to the Historic Environment in line with national policy, it is not considered as robust as the preferred policy (Option 2), which includes a requirement for a full Heritage Statement and where necessary, archaeological investigations. The preferred option provides a greater level of protection to the Historic Environment when compared to Option 2 and is therefore the preferable option.

Option 3 was rejected. Option 3 has the potential to result in harm to the Historic Environment where it could be avoided. By requiring less restrictive considerations of the Historic Environment Option 3 scores less favourably when compared to Options 1 and 2.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is compliant with national policy and affords a high level of protection to the Historic Environment. The preferred policy scored most favourably out of the options considered and will provide a clear framework for applicants and decision makers.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	0	0	0
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	0	0	0
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0
4.2. Well-designed, modern and efficient facilities	+	+	?/ +/-
4.3. Work towards waste net self-sufficiency	0	0	0

5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	0	0	0
5.2. Reduce greenhouse gas emissions	0	0	0
5.3. Promote energy efficiency	0	0	0
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	0	0	0
6.2. Encourage the use of low emission vehicles	0	0	0
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	+	++	?/ +/-
7.2. Green and blue infrastructure, rights of way and recreation	?/++	?/++	?
7.3. Reduce the incidence of crime associated with waste	0	0	0
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	+	++	?/ +/-
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?/+	?/+	?/ +/
8.2. Agricultural land	?/+	?/+	?/ +
8.3. Priority habitats and species, geodiversity and biodiversity	++	++	+
8.4. Hertfordshire's landscapes and natural environmental assets	++	++	+
8.5. Restoration to an appropriate after-use	++	++	+
8.6. Designated and non-designated heritage assets and their setting	+	++	+/-
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	?/+	?/+	?
9.2. Quality of watercourses.	?/+	?/+	?
9.3. Use of water and protection from over abstraction.	?/+	?/+	?
9.4 Protect the quality of groundwater	?/+	?/+	?

10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	0	0	0
10.2. Supply of materials for construction	0	0	0
10.3. Ensure appropriate waste infrastructure	0	0	0

Policy 19: Protection and Enhancement of Amenity

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which requires consideration of the protection and enhancement of amenity through an assessment
Option 2	A policy similar to Option 1 but which lists specific amenity considerations which any assessment must have regard to
Option 3	A policy similar to Option 2 but requiring further consideration of the effects of traffic movements beyond the application site

Preferred Policy Option

The preferred policy is Option 3.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

4.2, 5.1, 5.2, 5.3, 6.1, 7.1, 7.2, 7.5, 8.3, 8.4, 8.5, 9.1, 9.2, 9.3, 9.4 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. This option scored least favourably out of the options considered. Option 1 has the potential to result in some amenity considerations being missed as the policy is less descriptive and could provide an unclear framework for applicants and decision makers.

Option 2 was rejected. Whilst this option is compliant with national policy and presents a potentially suitable option, it is considered that the preferred policy (Option 3) provides

additional benefits and will result in greater consideration of amenity when compared to Option 2.

Justification for selection of Preferred Policy Option

The preferred policy (Option 3) is compliant with national policy and affords a high level of protection and consideration of amenity issues. The preferred policy scored most favourably out of the options considered and will provide a clear framework for applicants and decision makers. The preferred policy includes the requirement for applicants to further consider the effects of traffic movements beyond the application site. This additional requirement makes the preferred policy a more comprehensive and positive option.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	0	0	0
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	0	0	0
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0
4.2. Well-designed, modern and efficient facilities	+	++	++

4.3. Work towards waste net self-sufficiency	0	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	?/+	+	++
5.2. Reduce greenhouse gas emissions	?/+	+	++
5.3. Promote energy efficiency	?	?/+	?/+
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	?	?/+	?/+
6.2. Encourage the use of low emission vehicles	?	?	?
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	+	+	++
7.2. Green and blue infrastructure, rights of way and recreation	+	+	++
7.3. Reduce the incidence of crime associated with waste	?	?	?
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	+	+	++
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	+	++	++
8.4. Hertfordshire's landscapes and natural environmental assets	+	++	++
8.5. Restoration to an appropriate after-use	+	++	++
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	?	?+	?+
9.2. Quality of watercourses.	?	?/+	?/+
9.3. Use of water and protection from over abstraction.	?	?/+	?/+

9.4 Protect the quality of groundwater	?	?/+	?/+
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	0	0	0
10.2. Supply of materials for construction	0	0	0
10.3. Ensure appropriate waste infrastructure	?/+	?/+	?/+

Policy 20: Health and Wellbeing

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which supports proposals that address health impacts and seek improvements where appropriate
Option 2	A policy similar to Option 1 but which provides specific criteria for consideration and requires the submission of a Health Impact Assessment in accordance with the Council's Position Statement on HIA
Option 3	A more restrictive policy which requires HIA for all developments

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

4.2, 5.1, 5.2, 6.1, 6.2, 7.1, 7.2, 7.3, 7.5, 8.3, 8.4, 8.5, 9.1, 9.2, 9.3 and 9.4

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Option 1 scored least favourably out of the options considered. This policy could result in missed opportunities to consider and provide benefits for the health and wellbeing of residents.

Option 3 was rejected. Whilst this policy would ensure that an appropriate level of consideration is given to health and wellbeing, it is not considered that all minerals and waste development would necessitate the need for a HIA. This policy could result in applicants preparing HIA's where they are not required.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is compliant with national policy and affords a high level of protection and consideration of health and wellbeing. The preferred policy scored most favourably out of the options considered and will provide a clear framework for applicants and decision makers. The preferred policy takes into consideration local requirements by having regard to the council's own Position Statement on HIA.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	0	0	0
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	0	0	0
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0
4.2. Well-designed, modern and efficient facilities	+	++	++
4.3. Work towards waste net self-sufficiency	0	0	0

5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	+	+	+
5.2. Reduce greenhouse gas emissions	++	++	++
5.3. Promote energy efficiency	?	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	?/+	+	+
6.2. Encourage the use of low emission vehicles	?/+	+	+
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	+	++	++
7.2. Green and blue infrastructure, rights of way and recreation	+	++	++
7.3. Reduce the incidence of crime associated with waste	?/+	?/+	?/+
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	+	++	++
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	+	++	++
8.4. Hertfordshire's landscapes and natural environmental assets	+	++	++
8.5. Restoration to an appropriate after-use	+	++	++
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	+	++	++
9.2. Quality of watercourses.	+	++	++
9.3. Use of water and protection from over abstraction.	?/+	?/++	?/++
9.4 Protect the quality of groundwater	+	++	++

10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	0	0	0
10.2. Supply of materials for construction	0	0	0
10.3. Ensure appropriate waste infrastructure	?	?	?

Policy 21: Water Management

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which requires applicants to take account of any potential impact on water supply, water quality and flood risk and demonstrate that there are no unacceptable adverse impacts on water resources
Option 2	Similar to Option 1 but which requires proposals to follow the sequential and exception tests and prepare a Flood Risk Assessment where appropriate

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

4.2, 7.1, 8.3, 8.4, 8.5, 9.1, 9.2, 9.3 and 9.4

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Option 1 scored less favourably than Option 2 and could result in inadequate consideration of flood risk and the water environment.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is compliant with national policy and affords a high level of protection to the water environment by requiring proposals to follow the sequential and

exception tests and prepare a Flood Risk Assessment where appropriate. The preferred policy scored most favourably out of the options considered and will provide a clear framework for applicants and decision makers.

SA Sub Objective	Option 1	Option 2
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure		
1.1. Supply of minerals	0	0
1.2. Minimise sterilisation	0	0
1.3. Encourage prior extraction	0	0
1.4. Continued operation of minerals infrastructure	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water		
2.1. Proximity principle	0	0
2.2. Co-location	0	0
2.3. Safeguarding	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place		
3.1 Increased use of recycled and secondary aggregates	0	0
3.2. Use of virgin materials on-site	0	0
3.3. Promote re-use, recovery and recycling of waste	0	0
4. Promote and encourage sustainable waste management facilities and practices		
4.1. Oppose disposal to landfill and maximise waste recovery	0	0
4.2. Well-designed, modern and efficient facilities	++	++
4.3. Work towards waste net self-sufficiency	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures		
5.1. Reduce operational emissions	0	0
5.2. Reduce greenhouse gas emissions	0	0
5.3. Promote energy efficiency	0	0

6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water		
6.1. Reduce reliance on road freight and encourage rail or water freight	0	0
6.2. Encourage the use of low emission vehicles	0	0
7. Protect and positively contribute towards human health and wellbeing		
7.1. Human health and safety	++	++
7.2. Green and blue infrastructure, rights of way and recreation	?	?
7.3. Reduce the incidence of crime associated with waste	0	0
7.4. Operation and safety of aerodromes	?	?
7.5. Safeguard residential amenity	0	0
8. Protect and enhance the natural, built and historic environment		
8.1. Soil contamination and soil quality and quantity	?	?
8.2. Agricultural land	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	++	++
8.4. Hertfordshire's landscapes and natural environmental assets	++	++
8.5. Restoration to an appropriate after-use	+	+
8.6. Designated and non-designated heritage assets and their setting	?	?
9. Protect against flooding and safeguard water quality and quantity		
9.1. Flooding, flood alleviation and mitigation	+	++
9.2. Quality of watercourses.	+	++
9.3. Use of water and protection from over abstraction.	+	++
9.4 Protect the quality of groundwater	+	++
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities		
10.1. Employment opportunities	0	0
10.2. Supply of materials for construction	0	0
10.3. Ensure appropriate waste infrastructure	?	?

Policy 22: Water Recycling Sites

During the production of the Draft Plan, the following options were considered for this policy:

Option 1	No Policy. Rely on National Policy together Policy 3: Meeting Waste Management Needs, which can be applied generally to all types of waste management development including wastewater
Option 2	A dedicated policy supporting existing and new Water Recycling Centres, and providing criteria to ensure such development reduces the risk of flooding

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

2.2, 2.3, 3.3, 4.1, 4.2, 4.3, 5.3, 7.1, 7.3, 7.5, 9.1, 9.2, 10.1 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Option 1 could result in missed opportunities to ensure that Water Recycling Centres reduce the risk of flooding and avoid land within Flood Zone 3. Option 1 scores less favourably than Option 2.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is compliant with national policy and will ensure that specific considerations (such as flood risk) are applied in the determination of applications for new or extensions to Water Recycling Centres. The preferred policy scored most

favourably out of the options considered and will provide a clear framework for applicants and decision makers.

SA Sub Objective	Option 1	Option 2
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure		
1.1. Supply of minerals	0	0
1.2. Minimise sterilisation	0	0
1.3. Encourage prior extraction	0	0
1.4. Continued operation of minerals infrastructure	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water		
2.1. Proximity principle	?	?
2.2. Co-location	?/+	?/+
2.3. Safeguarding	++	++
2.4. Priority to the re-use of brownfield and employment land	?	?
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place		
3.1 Increased use of recycled and secondary aggregates	0	0
3.2. Use of virgin materials on-site	0	0
3.3. Promote re-use, recovery and recycling of waste	++	++
4. Promote and encourage sustainable waste management facilities and practices		
4.1. Oppose disposal to landfill and maximise waste recovery	+	+
4.2. Well-designed, modern and efficient facilities	++	++
4.3. Work towards waste net self-sufficiency	++	++
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures		
5.1. Reduce operational emissions	?	?
5.2. Reduce greenhouse gas emissions	?	?
5.3. Promote energy efficiency	?	?/+

6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water		
6.1. Reduce reliance on road freight and encourage rail or water freight	?	?
6.2. Encourage the use of low emission vehicles	?	?
7. Protect and positively contribute towards human health and wellbeing		
7.1. Human health and safety	+	++
7.2. Green and blue infrastructure, rights of way and recreation	0	0
7.3. Reduce the incidence of crime associated with waste	?/+	?/+
7.4. Operation and safety of aerodromes	?	?
7.5. Safeguard residential amenity	+	++
8. Protect and enhance the natural, built and historic environment		
8.1. Soil contamination and soil quality and quantity	?	?
8.2. Agricultural land	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	?	?
8.4. Hertfordshire's landscapes and natural environmental assets	?	?
8.5. Restoration to an appropriate after-use	0	0
8.6. Designated and non-designated heritage assets and their setting	?	?
9. Protect against flooding and safeguard water quality and quantity		
9.1. Flooding, flood alleviation and mitigation	+	++
9.2. Quality of watercourses.	+	++
9.3. Use of water and protection from over abstraction.	?	?
9.4 Protect the quality of groundwater	?	?
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities		
10.1. Employment opportunities	++	++
10.2. Supply of materials for construction	0	0
10.3. Ensure appropriate waste infrastructure	++	++

Policy 23: Transport Infrastructure Sites

During the production of the Plan, the following options were considered for this policy:

Option 1	No Policy. Rely on National Policy together with any other relevant policies in the development plan
Option 2	A policy which identifies Transport Infrastructure Sites (TIS) and encourages new transport infrastructure
Option 3	A similar policy to Option 2, but which includes more restrictive criteria on the location of new TIS

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.4, 2.3, 3.1, 4.1, 5.1, 5.2, 6.1, 6.2, 7.1, 7.5, 10.1, 10.2 and 10.3

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Option 1 scored least favourably out of the options considered. It is considered that Option 1 does the least to guide future TIS development.

Option 3 was rejected. It is considered that the flexibility included within Option 2 is most appropriate for Hertfordshire. The location of Transport Infrastructure is often guided by need and where the infrastructure is available (e.g. placement of the railway) and Option 3 could result in missed opportunities for new infrastructure by being too restrictive.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is compliant with national policy and scored most favourably out of the options considered. It will provide a clear framework for applicants and decision makers and supports proposals for new and extensions or improvements to existing TIS in a flexible way that includes opportunities to help facilitate sustainable growth proposals identified in the Development Plan and/or reduce the amount of material being transported by road.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	+	++	++
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	?	?	?
2.2. Co-location	?	?	?
2.3. Safeguarding	?/+	?/+	?/+
2.4. Priority to the re-use of brownfield and employment land	?	?	?/+
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	?/+	?/+	?/+
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	?	?	?
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	?/+	?/+	?/+
4.2. Well-designed, modern and efficient facilities	?	?	?
4.3. Work towards waste net self-sufficiency	0	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	+	++	++

5.2. Reduce greenhouse gas emissions	+	++	++
5.3. Promote energy efficiency	?	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	+	++	++
6.2. Encourage the use of low emission vehicles	+	++	++
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	?/+	?/+	?/+
7.2. Green and blue infrastructure, rights of way and recreation	0	0	0
7.3. Reduce the incidence of crime associated with waste	?	?	?
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	?/+	?/+	?/+
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	?	?	?
8.4. Hertfordshire's landscapes and natural environmental assets	?	?	?
8.5. Restoration to an appropriate after-use	0	0	0
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	?	?	?
9.2. Quality of watercourses.	?	?	?
9.3. Use of water and protection from over abstraction.	?	?	?
9.4 Protect the quality of groundwater	?	?	?
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	++	++	++

10.2. Supply of materials for construction	?/+	+	+
10.3. Ensure appropriate waste infrastructure	?/+	?/+	?/+

Policy 24: Transport

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which requires justification for road transport and its effect on various factors such as health and amenity, as well as requiring a full Transport Assessment for developments with significant transport movements
Option 2	Two separate policies for transport – one relating to operational transport and the other relating to strategic transport matters, together covering the same elements as Option 1
Option 3	A similar policy to Option 1, but less comprehensive and with fewer requirements
Option 4	A similar policy to Option 1 which also deals with Rights of Way

Preferred Policy Option

The preferred policy is Option 1.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

1.4, 4.2, 5.1, 5.2, 5.3, 6.1, 6.2, 7.1, 7.2, 7.5, 8.3, 8.4 and 8.6

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 2 was rejected. Option 2 would cover the same elements as Option 1 but across two separate policies. Whilst this Option scores the same as the preferred policy (Option 1) it is considered advantageous to join matters into one policy to keep all matters related to transport in one place and keep the plan more concise.

Option 3 was rejected. This option scores least favourably out of the options considered and has the potential to result in missed opportunities concerning the minimisation of impacts related to transport.

Option 4 was rejected. Option 4 would provide the same benefits (concerning transport) as the preferred policy whilst also covering matters pertaining to Rights of Way. It could be advantageous to join the two subjects together, given that Rights of Way are classified as a highway. However, Rights of Way require a unique set of considerations which may be better placed within their own policy. Excluding Rights of Way from the transport policy will allow for distinction between the two matters and ensure requirements for Rights of Way are clearly outlined.

Justification for selection of Preferred Policy Option

The preferred policy (Option 1) is compliant with national policy and will provide a clear framework for applicants and decision makers. The preferred policy scored the same as Options 2 and 4 however it has the advantage of keeping all matters related to transport in one policy and will ensure the considerations for Rights of Way are clear and distinct from transport matters.

SA Sub Objective	Option 1	Option 2	Option 3	Option 4
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure				
1.1. Supply of minerals	0	0	0	0
1.2. Minimise sterilisation	0	0	0	0
1.3. Encourage prior extraction	0	0	0	0
1.4. Continued operation of minerals infrastructure	++	++	?/+	++
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water				
2.1. Proximity principle	0	0	0	0
2.2. Co-location	0	0	0	0
2.3. Safeguarding	0	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place				

3.1 Increased use of recycled and secondary aggregates	0	0	0	0
3.2. Use of virgin materials on-site	0	0	0	0
3.3. Promote re-use, recovery and recycling of waste	0	0	0	0
4. Promote and encourage sustainable waste management facilities and practices				
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0	0
4.2. Well-designed, modern and efficient facilities	++	++	+	++
4.3. Work towards waste net self-sufficiency	0	0	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures				
5.1. Reduce operational emissions	++	++	+	++
5.2. Reduce greenhouse gas emissions	++	++	+	++
5.3. Promote energy efficiency	+	+	+	+
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water				
6.1. Reduce reliance on road freight and encourage rail or water freight	++	++	+	++
6.2. Encourage the use of low emission vehicles	++	++	+	++
7. Protect and positively contribute towards human health and wellbeing				
7.1. Human health and safety	++	++	+	++
7.2. Green and blue infrastructure, rights of way and recreation	++	++	+	++
7.3. Reduce the incidence of crime associated with waste	0	0	0	0
7.4. Operation and safety of aerodromes	?	?	?	?
7.5. Safeguard residential amenity	++	++	+	++
8. Protect and enhance the natural, built and historic environment				
8.1. Soil contamination and soil quality and quantity	0	0	0	0
8.2. Agricultural land	0	0	0	0

8.3. Priority habitats and species, geodiversity and biodiversity	++	++	+	++
8.4. Hertfordshire's landscapes and natural environmental assets	++	++	+	++
8.5. Restoration to an appropriate after-use	0	0	0	0
8.6. Designated and non-designated heritage assets and their setting	++	++	+	++
9. Protect against flooding and safeguard water quality and quantity				
9.1. Flooding, flood alleviation and mitigation	0	0	0	0
9.2. Quality of watercourses.	0	0	0	0
9.3. Use of water and protection from over abstraction.	0	0	0	0
9.4 Protect the quality of groundwater	0	0	0	0
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities				
10.1. Employment opportunities	0	0	0	0
10.2. Supply of materials for construction	0	0	0	0
10.3. Ensure appropriate waste infrastructure	0	0	0	0

Policy 25: Public Rights of Way

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which seeks to protect and enhance PRoW
Option 2	A policy similar to Option 1 but which promotes the benefits of active travel and seeks links in improvements to other plans and strategies
Option 3	Similar to Option 2 but which is less restrictive on the requirements for alternative/temporary provision

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

4.2, 5.1, 5.2, 5.3, 6.1, 7.1, 7.2, 7.5, 8.3, 8.4 and 8.5

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Option 1 scored the least favourably out of the options considered and could result in a policy which misses opportunities to enhance Rights of Way in line with local aspirations, such as those outlined in the Hertfordshire Rights of Way Improvement Plan.

Option 3 was rejected. Option 3 could result in some harm to the Rights of Way network, especially where proposals for mineral extraction are concerned. Proposals for mineral extraction can often involve diverting Rights of Way routes on a temporary (and sometimes

permanent) basis and therefore the Rights of Way policy needs to adequately address this matter.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is compliant with national policy and will provide a clear framework for applicants and decision makers. The preferred policy scored most favourably out of the options considered and will provide a high level of protection to the Hertfordshire Rights of Way network.

SA Sub Objective	Option 1	Option 2	Option 3
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure			
1.1. Supply of minerals	0	0	0
1.2. Minimise sterilisation	0	0	0
1.3. Encourage prior extraction	0	0	0
1.4. Continued operation of minerals infrastructure	0	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water			
2.1. Proximity principle	0	0	0
2.2. Co-location	0	0	0
2.3. Safeguarding	0	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place			
3.1 Increased use of recycled and secondary aggregates	0	0	0
3.2. Use of virgin materials on-site	0	0	0
3.3. Promote re-use, recovery and recycling of waste	0	0	0
4. Promote and encourage sustainable waste management facilities and practices			
4.1. Oppose disposal to landfill and maximise waste recovery	0	0	0
4.2. Well-designed, modern and efficient facilities	+	++	+
4.3. Work towards waste net self-sufficiency	0	0	0

5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures			
5.1. Reduce operational emissions	?/+	?/+	?/+
5.2. Reduce greenhouse gas emissions	?/+	++	++
5.3. Promote energy efficiency	?/+	?/+	?/+
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water			
6.1. Reduce reliance on road freight and encourage rail or water freight	?/+	++	++
6.2. Encourage the use of low emission vehicles	?	?	?
7. Protect and positively contribute towards human health and wellbeing			
7.1. Human health and safety	+	++	+
7.2. Green and blue infrastructure, rights of way and recreation	++	++	+
7.3. Reduce the incidence of crime associated with waste	0	0	0
7.4. Operation and safety of aerodromes	?	?	?
7.5. Safeguard residential amenity	+	++	+
8. Protect and enhance the natural, built and historic environment			
8.1. Soil contamination and soil quality and quantity	?	?	?
8.2. Agricultural land	?	?	?
8.3. Priority habitats and species, geodiversity and biodiversity	+	++	++
8.4. Hertfordshire's landscapes and natural environmental assets	+	++	++
8.5. Restoration to an appropriate after-use	+	+	+
8.6. Designated and non-designated heritage assets and their setting	?	?	?
9. Protect against flooding and safeguard water quality and quantity			
9.1. Flooding, flood alleviation and mitigation	0	0	0
9.2. Quality of watercourses.	0	0	0
9.3. Use of water and protection from over abstraction.	0	0	0
9.4 Protect the quality of groundwater	0	0	0

10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities			
10.1. Employment opportunities	0	0	0
10.2. Supply of materials for construction	0	0	0
10.3. Ensure appropriate waste infrastructure	0	0	0

Policy 26: Cumulative Impacts

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which supports minerals and waste proposals where it can be demonstrated that the cumulative impact would not result in unacceptable adverse effects on the environment of an area, or on the amenity or health of a local community
Option 2	No Policy. Rely on other policies in the Plan that deal with 'effects', along with National Policy

Preferred Policy Option

The preferred policy is Option 1.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

4.2, 5.1, 5.2, 6.1, 7.1, 7.2, 7.4, 7.5, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 9.1, 9.2, 9.3 and 9.4

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 2 scores less favourably when compared to Option 1. Option 1 will ensure that cumulative impacts are explicitly considered, across a range of development types and over time.

Justification for selection of Preferred Policy Option

The preferred policy (Option 1) is compliant with national policy and will provide a clear framework for applicants and decision makers. The preferred policy scores most favourably out of the options considered and will ensure that cumulative impacts are explicitly considered.

SA Sub Objective	Option 1	Option 2
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure		
1.1. Supply of minerals	0	0
1.2. Minimise sterilisation	0	0
1.3. Encourage prior extraction	0	0
1.4. Continued operation of minerals infrastructure	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water		
2.1. Proximity principle	0	0
2.2. Co-location	0	0
2.3. Safeguarding	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place		
3.1 Increased use of recycled and secondary aggregates	0	0
3.2. Use of virgin materials on-site	0	0
3.3. Promote re-use, recovery and recycling of waste	0	0
4. Promote and encourage sustainable waste management facilities and practices		
4.1. Oppose disposal to landfill and maximise waste recovery	0	0
4.2. Well-designed, modern and efficient facilities	++	++
4.3. Work towards waste net self-sufficiency	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures		
5.1. Reduce operational emissions	+	+
5.2. Reduce greenhouse gas emissions	++	++
5.3. Promote energy efficiency	?	?
6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water		
6.1. Reduce reliance on road freight and encourage rail or water freight	?/++	?/++

6.2. Encourage the use of low emission vehicles	?	?
7. Protect and positively contribute towards human health and wellbeing		
7.1. Human health and safety	++	+
7.2. Green and blue infrastructure, rights of way and recreation	++	++
7.3. Reduce the incidence of crime associated with waste	?	?
7.4. Operation and safety of aerodromes	?/++	?/++
7.5. Safeguard residential amenity	++	+
8. Protect and enhance the natural, built and historic environment		
8.1. Soil contamination and soil quality and quantity	?/+	?/+
8.2. Agricultural land	?/+	?/+
8.3. Priority habitats and species, geodiversity and biodiversity	++	++
8.4. Hertfordshire's landscapes and natural environmental assets	++	++
8.5. Restoration to an appropriate after-use	++	++
8.6. Designated and non-designated heritage assets and their setting	++	++
9. Protect against flooding and safeguard water quality and quantity		
9.1. Flooding, flood alleviation and mitigation	++	++
9.2. Quality of watercourses.	++	++
9.3. Use of water and protection from over abstraction.	++	++
9.4 Protect the quality of groundwater	++	++
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities		
10.1. Employment opportunities	0	0
10.2. Supply of materials for construction	0	0
10.3. Ensure appropriate waste infrastructure	0	0

Policy 27: Aerodrome Safeguarding Areas

During the production of the Plan, the following options were considered for this policy:

Option 1	A policy which restricts development within Aerodrome Safeguarding Areas that may pose a risk to aviation safety
Option 2	A policy similar to Option 1 but which includes the requirement for a Bird Management Plan where the risk of bird strike has been identified

Preferred Policy Option

The preferred policy is Option 2.

The preferred policy option scored either a likely minor positive effect (+) or a likely significant positive effect (++) against the following Sub Objectives:

4.2, 7.4, 8.3 and 8.5

Summary of Mitigation Measures

No mitigation measures proposed.

Other Options Considered

Option 1 was rejected. Whilst Option 1 would be compliant with national policy and Town and Country Planning (safeguarded aerodromes, technical sites and military explosives storage areas) Direction 2002 it does not score as well as the preferred policy (Option 2), which provides specific consideration/mitigation of potential impacts.

Justification for selection of Preferred Policy Option

The preferred policy (Option 2) is compliant with national policy and The Town and Country Planning (safeguarded aerodromes, technical sites and military explosives storage areas) Direction 2002. It will provide a clear framework for applicants and decision makers and will afford the highest degree of protection to Aerodrome Safeguarding Areas

out of the options considered, due to its requirement for a Bird Management Plan where the risk of bird strike has been identified.

SA Sub Objective	Option 1	Option 2
1. Ensure a steady and adequate supply of minerals to meet demand and protect mineral resources and infrastructure		
1.1. Supply of minerals	0	0
1.2. Minimise sterilisation	0	0
1.3. Encourage prior extraction	0	0
1.4. Continued operation of minerals infrastructure	0	0
2. Encourage the appropriate location of and safeguard waste management facilities, including waste water		
2.1. Proximity principle	0	0
2.2. Co-location	0	0
2.3. Safeguarding	0	0
2.4. Priority to the re-use of brownfield and employment land	0	0
3. Encourage the sustainable use of materials, including the use of secondary and recycled aggregates, and the prior extraction of mineral before other development takes place		
3.1 Increased use of recycled and secondary aggregates	0	0
3.2. Use of virgin materials on-site	0	0
3.3. Promote re-use, recovery and recycling of waste	0	0
4. Promote and encourage sustainable waste management facilities and practices		
4.1. Oppose disposal to landfill and maximise waste recovery	0	0
4.2. Well-designed, modern and efficient facilities	?/+	+
4.3. Work towards waste net self-sufficiency	0	0
5. Ensure that mineral and waste management development addresses and minimises the impacts of and contributions towards climate change through appropriate mitigation and built-in resilience measures		
5.1. Reduce operational emissions	0	0
5.2. Reduce greenhouse gas emissions	0	0
5.3. Promote energy efficiency	0	0

6. Encourage the greater use of sustainable transport of minerals and waste, e.g., by road, rail and water		
6.1. Reduce reliance on road freight and encourage rail or water freight	0	0
6.2. Encourage the use of low emission vehicles	0	0
7. Protect and positively contribute towards human health and wellbeing		
7.1. Human health and safety	0	0
7.2. Green and blue infrastructure, rights of way and recreation	0	0
7.3. Reduce the incidence of crime associated with waste	0	0
7.4. Operation and safety of aerodromes	+	++
7.5. Safeguard residential amenity	0	0
8. Protect and enhance the natural, built and historic environment		
8.1. Soil contamination and soil quality and quantity	0	0
8.2. Agricultural land	0	0
8.3. Priority habitats and species, geodiversity and biodiversity	+	++
8.4. Hertfordshire's landscapes and natural environmental assets	?	?
8.5. Restoration to an appropriate after-use	?/+	+
8.6. Designated and non-designated heritage assets and their setting	0	0
9. Protect against flooding and safeguard water quality and quantity		
9.1. Flooding, flood alleviation and mitigation	0	0
9.2. Quality of watercourses.	0	0
9.3. Use of water and protection from over abstraction.	0	0
9.4 Protect the quality of groundwater	0	0
10. Recognise the importance of the minerals and waste sector in the local and wider economy as a generator of employment and its provision of infrastructure which supports businesses and communities		
10.1. Employment opportunities	0	0
10.2. Supply of materials for construction	0	0
10.3. Ensure appropriate waste infrastructure	0	0