Greater Manchester Combined Authority

Integrated Assessment of the Greater Manchester Spatial Framework

IA of 2020 draft GMSF Growth and Spatial Options Paper

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Contents

Page

1 Introduction 1
1.1 Context 1
1.2 Integrated Assessment 1
1.3 Scoping Report 2
1.4 Habitat Regulations Assessment 2
1.5 Purpose of this report 2
1.6 Applying the Integrated Assessment framework 2

2 2020 Growth and Spatial Options 6
2.1 Introduction 6
2.2 Evolution of options from 2015 to 2020 6
2.3 2020 options 8

3 The Integrated Assessment 9
3.1 Introduction 9
3.2 IA of growth options 9
3.3 IA of spatial options 13

4 Conclusion 25
4.1 Summary of options appraisal 25
4.2 Mitigation and enhancement 26

1 Introduction

1.1 Context

The Greater Manchester Spatial Framework (GMSF) is being prepared by the ten Greater Manchester (GM) local planning authorities. The GMSF will be a formal planning document that provides a coherent, strategic context for district local plans.

The GMSF will be a statutory planning document and will include strategic policies for Greater Manchester through to 2037. The GMSF will provide GM with an overarching plan which the ten local authorities will use to make land available to address strategic challenges and priorities.

The submission version of the GMSF will be available for consultation in autumn 2020.

Please note that the GMSF has been prepared as a joint Development Plan Document by the Greater Manchester Combined Authority, therefore where reference is made to Greater Manchester Combined Authority (GMCA), this is on behalf of the ten Greater Manchester Authorities.

1.2 Integrated Assessment

As part of the development of the GMSF, an Integrated Assessment (IA) is being undertaken incorporating the requirements of:

- Sustainability Appraisal (SA): mandatory under section 19 (5) of the Planning and Compulsory Purchase Act 2004.
- Strategic Environmental Assessment (SEA): mandatory under the Environmental Assessment of Plans and Programmes Regulations 2004 (which transpose the European Directive 2001/42/EC into English law).
- Equality Impact Assessment (EqIA): required to be undertaken for plans, policies and strategies by the Equality Act 2010.
- Health Impact Assessment (HIA): there is no statutory requirement to undertake HIA, its requirements have been considered to add value and depth to the assessment process.

Further detail on the Integrated Assessment components and stages can be found within Section 2 of the main IA Report, 'IA of 2020 draft GMSF Consultation Document'.

1.3 Scoping Report

Consultation was originally undertaken in summer 2015 on the IA Scoping Report. The report has gone through several updates in response to comments received. It was most recently updated in July 2020, to incorporate comments received from the 2019 draft GMSF consultation, in addition to updating the evidence base. The Scoping Report:

- defined the IA methodology;
- reviewed relevant policy, plans, programmes and strategies and their relationship to the GMSF;
- conducted extensive baseline research across a range of environmental and socio-economic topics;
- identified key issues for the GMSF and the IA; and
- defined the objectives and assessment criteria to be used in the IA.

1.4 Habitat Regulations Assessment

A Habitat Regulations Assessment (HRA) of the GMSF is being undertaken in parallel with this IA by the Greater Manchester Ecology Unit. Crossover with this separate workstream has been considered throughout the IA of draft policies where necessary, which is the subject of a separate report.

1.5 Purpose of this report

This report is to present the IA of the growth and spatial options for the 2020 draft GMSF. The IA of these options will help to identify where there are gaps in understanding, and highlight which options will contribute the most to meeting the objectives of the IA.

1.6 Applying the Integrated Assessment framework

The IA Framework is made up of a series of IA objectives and assessment criteria which have been developed specifically for the GMSF. This framework (listed in Table 1 below) is used to identify the likely social, economic and environmental effects and guide mitigation and policy development.

The IA Framework has been applied to each of the different growth and spatial options, the results of which are detailed within this report. All objectives within the Framework were reviewed during the 2020 IA update at the scoping stage and each carries an equal weighting.

Further detail on applying the IA Framework can be found in Section 2 of the main IA Report ‘IA of 2020 draft GMSF Consultation Document’.

Table 1: IA Framework

Ref	Objective	Assessment criteria
1	Provide a sustainable supply of housing land including for an appropriate mix of sizes, types, tenures in locations to meet housing need, and to support economic growth	Will the GMSF: Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and affordable housing? Ensure an appropriate mix of types, tenures and sizes of properties in relation to the respective levels of local demand? Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate? Support improvements in the energy efficiency and resilience of the housing stock?
2	Provide a sustainable supply of employment land to ensure sustainable economic growth and job creation	Will the GMSF: Meet current and future demand for employment land across GM? Support education and training to provide a suitable labour force for future growth? Provide sufficient employment land in locations that are well-connected and well-served by infrastructure?
3	Ensure that there is sufficient coverage and capacity of transport and utilities to support growth and development	Will the GMSF: Ensure that the transport network can support and enable the anticipated scale and spatial distribution of development? Improve transport connectivity? Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development?
4	Reduce levels of deprivation and disparity	Will the GMSF: Reduce the proportion of people living in deprivation? Support reductions in poverty (including child and fuel poverty), deprivation and disparity across the domains of the Indices of Multiple Deprivation?
5	Promote equality of opportunity and the elimination of discrimination	Will the GMSF: Foster good relations between different people? Ensure equality of opportunity and equal access to facilities/infrastructure for all? Ensure no discrimination based on ‘protected characteristics’, as defined in the Equality Act 2010? Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?
6	Support improved health and wellbeing of the population and reduce health inequalities	Will the GMSF: Support healthier lifestyles and support improvements in determinants of health? Reduce health inequalities within GM and with the rest of England? Promote access to green space?
7	Ensure access to and provision of	Will the GMSF: Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status? Ensure sufficient access to educational facilities for all children?

Ref	Objective	Assessment criteria
	appropriate social infrastructure[1]	Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?
8	Support improved educational attainment and skill levels for all	Will the GMSF: Improve education levels of children in the area, regardless of their background? Improve educational and skill levels of the population of working age?
9	Promote sustainable modes of transport	Will the GMSF: Reduce the need to travel and promote efficient patterns of movement? Promote a safe and sustainable public transport network that reduces reliance on private motor vehicles? Support the use of sustainable and active modes of transport?
10	Improve air quality	Will the GMSF: Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?
11	Conserve and enhance biodiversity, green infrastructure and geodiversity assets	Will the GMSF: Provide opportunities to enhance new and existing wildlife and geological sites? Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features? Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure? Ensure access to green infrastructure providing opportunities for recreation, amenity and tranquillity?
12	Ensure communities, developments and infrastructure are resilient to the effects of expected climate change	Will the GMSF: Ensure that communities, existing and new developments and infrastructure systems are resilient to the predicted effects of climate change across GM?
13	Reduce the risk of flooding to people and property	Will the GMSF: Restrict the development of property in areas of flood risk? Ensure adequate measures are in place to manage existing flood risk? Ensure that development does not increase flood risk due to increased run-off rates? Ensure development is appropriately future proof to accommodate future levels of flood risk including from climate change?
14	Protect and improve the quality and availability of water resources	Will the GMSF: Encourage compliance with the Water Framework Directive? Promote management practices that will protect water features from pollution? Avoid consuming greater volumes of water resources than are available to maintain a healthy environment?

[1] In this instance social infrastructure is being used as a term to refer to schools, local healthcare services, playgrounds, public sports facilities, community buildings and land.

Ref	Objective	Assessment criteria
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas emissions	Will the GMSF: Encourage reduction in energy use and increased energy efficiency? Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments? Promote a proactive reduction in direct and indirect greenhouse gas emissions emitted across GM?
16	Conserve and/or enhance landscape, townscape, heritage assets and their setting and the character of GM	Will the GMSF: Improve landscape quality and the character of open spaces and the public realm? Conserve and enhance the historic environment, heritage assets and their setting? Respect, maintain and strengthen local character and distinctiveness?
17	Ensure that land resources are allocated and used in an efficient and sustainable manner to meet the housing and employment needs of GM, whilst reducing land contamination	Will the GMSF: Support the development of previously developed land and other sustainable locations? Protect the best and most versatile agricultural land / soil resources from inappropriate development? Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses? Support reductions in land contamination through the remediation and reuse of previously developed land?
18	Promote sustainable consumption of resources and support the implementation of the waste hierarchy	Will the GMSF: Support the sustainable use of physical resources? Promote movement up the waste hierarchy? Promote reduced waste generation rates?

2 2020 Growth and Spatial Options

2.1 Introduction

Sustainability Appraisal (SA) (one of the component parts of the IA) places great emphasis on the consideration of reasonable alternatives. Planning Practice Guidance states that:

> *The sustainability appraisal needs to consider and compare all reasonable alternatives as the plan evolves, including the preferred approach, and assess these against the baseline environmental, economic and social characteristics of the area and the likely situation if the plan were not to be adopted*. (PPG, Paragraph: 018 Reference ID: 11-018-20140306)

Reasonable alternatives (i.e. the options) have been assessed as part of this stage of the IA. This section provides context into options development throughout previous iterations of the GMSF (from 2015 onwards) and then introduces the 2020 growth and spatial options.

The 2020 options are set out in the GMSF 2020 Growth and Spatial Options Paper (August 2020), which is the focus of this IA report.

2.2 Evolution of options from 2015 to 2020

The following section is a narrative outlining the evolution of the growth and spatial options as detailed in the following two GMSF reports:

- Revised Draft GMSF Spatial Options (January 2019); and
- GMSF 2020 Growth and Spatial Options – Draft for Appraisal (August 2020).

This also includes context dating back to the 2015/6 options (taken from the 2019 report), as this sets the scene for understanding the 2019 options.

2.2.1 Context of the growth options

Three growth options were originally developed for the 2015 draft GMSF:

- Option 1 – Baseline Land Supply;
- Option 2 – Objectively Assessed Needs;
- Option 3 – Higher Accelerated Growth Scenario.

Following completion of the 2015 consultation and the IA of Vision, Objectives and Growth Options (October 2015), further work was undertaken to update the evidence base. It was then concluded by the AGMA Executive Board that Option 2 was preferred and necessary; this growth option was therefore used in the 2016 GMSF.

As there were not considered sufficient material changes during the preparation of 2019 GMSF, the Option 2 of the 2016 GMSF was still considered by AGMA Executive Board to be the preferred option for the 2019 GMSF. Therefore, levels of growth in the Revised 2019 draft GMSF were designed to meet objectively assessed needs and employed the same principle as Growth Option 2: Objectively Assessed Needs.

For the 2020 draft GMSF, the 2019 growth options were revisited, especially in light of COVID-19. It was concluded that there is insufficient certainty around the pandemic at this stage to produce a 4th reasonable growth alternative. However, due to consultation responses to the 2019 draft GMSF, although growth options had been previously assessed in 2015, it was considered appropriate to assess the alternative growth options again along with the 2019 preferred option (see Section 2.3.1 for the 2020 growth options).

2.2.2 Context of the spatial options

The **2016 draft GMSF** considered four spatial options for delivering the preferred Growth Option 2 – Objectively Assessed Needs. These four spatial options were subject to assessment through the 2016 IA of Strategic Spatial Options. The IA concluded that Option 3 (GM's Existing Land Supply (allocations / permissions) together with strategic allocations to meet the OAN at a GM scale was strategic in nature and presented the best option for delivering sustainable growth.

During the preparation of the **2019 draft GMSF**, six spatial options were developed and considered:

- Option 1 – Business as usual;
- Option 2 – Urban max;
- Option 3 – Transit City;
- Option 4 – Boost northern competitiveness;
- Option 5 – Sustain northern competitiveness;
- Option 6 – Hybrid growth.

The 2019 IA on the spatial options was carried out by GMCA as part of their options paper. This included a detailed narrative of the assessment within the document, and the assessment matrices in an appendix. The results of this appraisal demonstrated that none of the original five options individually met the objectively assessed needs; thus, Option 6 – Hybrid Growth was developed which combined Options 3, 4 and 5. Option 6 was therefore the preferred spatial option for the 2019 draft GMSF.

During the preparation of the 2020 draft GMSF, the spatial options were revisited. Five spatial options were considered (see Section 2.3.2 for the full list of options). Three options (Business as usual, Urban max, Hybrid

growth option) were carried forward from the 2019 spatial options, with two new options introduced as a result of the 2019 consultation.

2.3 2020 options

2.3.1 Growth options

The 2020 draft GMSF growth options are:

- Option 1: Business as Usual.
- Option 2: Meeting GM's Local Housing Need (LHN) and employment land Objectively Assessed Needs.
- Option 3: Higher Growth Scenario, going above GM's LHN and Employment Land Needs.

Further detail including the IA of these growth options can be found in Section 3.2.

2.3.2 Spatial options

The 2020 draft GMSF spatial options are:

- Option 1 – Business as Usual;
- Option 2 – Urban Max;
- Option 3 – Public Transport Max;
- Option 4 – GMSF 2019 Spatial [Hybrid] Option; and
- Option 5 – Decentralisation / Sub-urbanisation.

Further detail including the IA of these spatial options can be found in Section 3.3.

3 The Integrated Assessment

3.1 Introduction

This section contains a summary of the assessment of the growth and spatial options using the IA Framework.

Due to some options being carried over from 2019 and others being introduced as part of the 2020 draft GMSF preparation, there have been varying approaches to conducting these assessments, as detailed in the following sections.

3.2 IA of growth options

Table 2 describes the 2020 draft GMSF growth options in further detail.

Due to these options being reintroduced for the 2020 draft GMSF, it was considered appropriate to conduct a full IA of all three growth options. A summary of these assessments is provided in Table 2. The summary follows the format below:

- Synergies with the IA Framework; and
- Enhancement and mitigation.

It should be noted that the enhancement and mitigation is provided for each option for completeness. The enhancement and mitigation is considered to be addressed primarily through the wording of strategic and thematic policies.

Appendix A contains the 2020 IA matrices associated with the growth options.

Table 2: 2020 growth options

2020 growth options[2]
Growth Option 1: Business as usual – Limiting the level of growth to that capable of being delivered by the 2020 existing housing and employment land supply The business as usual growth option would see the level of growth (and distribution) being limited to what would be capable of being delivered by GM's existing housing and employment land supply over the plan period 2020-2037, as identified at March 2020. A similar growth option has been considered previously, however, as it was proposed through consultation responses to the GMSF 2019, it has been considered appropriate to assess it again against the 2020 GMSF 2020 Vision and Strategic Objectives. This growth option would equate to:

[2] GMSF 2020 Growth and Spatial Options Paper (August 2020)

- Housing – 174,859 dwellings
- Industrial and warehousing – 2,109,406 sq.m
- Offices – 3,179,682 sq.m.

Growth Option 2: Meeting GM's Local Housing Need (LHN) and employment land Objectively Assessed Needs

This growth option would see Greater Manchester meeting its overall housing and employment land needs. Over the plan period (2020-2037) this would require GM to identify sufficient land for the delivery of:

- Housing – 179,078 dwellings
- Industrial and warehousing – 4,075,000 sq.m
- Offices – 2,549,000 sq.m

Whilst this option would ensure that sufficient land was made available to meet the overall housing and employment land needs over the lifetime of the plan, there could be a slower level of growth in the early (up to first five) years of the Plan period, to take account of short-term impacts from the Covid-19 pandemic.

Growth Option 3: Meeting a higher level of new housing growth than GM's LHN

As part of their response to the GMSF 2019 consultation, the Housing the Powerhouse Campaign group put forward a growth option which suggested a higher level of housing than that proposed in the GMSF 2019. The Campaign stated that instead of using GM's LHN as the housing target, the GMSF should use a 'figure that goes beyond the 227,000 homes included in the Outline of a Prospective Housing Package for Greater Manchester'. Although this option proposed "going beyond 227,000 homes", the level "beyond" was not quantified therefore this option assumes the delivery of 227,000 new homes over the lifetime of the plan, i.e. up to 2037.

Similarly, the campaign group did not suggest an overall employment land target in this scenario. However, in order to undertake an assessment of this growth option the employment land target needs to be quantified. As there is no prescribed methodology to do this, the employment land target for this option has been calculated based on an estimate of the number of jobs that 227,000 dwellings would demand in the industrial and warehousing and office sectors and equating that to a land requirement.

As this option was proposed through the GMSF 2019 consultation process, there is no specific account taken of potential short-term impacts from the Covid-19 pandemic. Over the plan period (2020-2037) this would equate to sufficient land being identified for the delivery of:

- Housing – 227,000 dwellings
- Industrial and warehousing – 4,348,000 sq m
- Offices – 2,814,000 sq m

Growth Option 1 – Business as usual

Synergies with the IA Framework

Growth Option 1 would not meet the LHN across GM and therefore does not align with IA objective 1. It would also limit sustainable growth of employment land, to existing land supply, thus impacting the ability to meet employment demand over the plan period; this option therefore shows a negative effect against IA objective 2.

With regard to reducing deprivation (IA objective 4) and the promotion of equal opportunities and eliminating discrimination (IA objective 5), this option does not meet the objectively assessed need for employment land and therefore could potentially negatively impact the ability of different areas to gain employment, dependent upon the location of sites.

In terms of health and wellbeing (IA objective 6), if both housing and employment provision does not meet the needs of an area, lifestyle quality could be impacted, thus reducing the need of an affected area.

As the existing land supply does not meet housing or employment need, there will be increased pressure and less sites available to provide necessary social facilities (IA objective 7) and green infrastructure (IA objective 11). However, a larger proportion of existing supply is brownfield or within an urban area. This option therefore has a positive impact against IA objective 17.

Enhancement and mitigation

The level of growth and distribution of sites could be increased in order to meet LHN and objectively assessed needs for employment land. However, amending this aspect would inherently alter Growth Option 1.

A strategic approach to sites would ensure land is well-connected and would adequately address the needs of different areas over the plan period.

Growth Option 2 – Objectively Assessed Needs

Synergies with the IA Framework

Option 2 performs well against IA objectives 1 and 2, as it innately meets the LHN and objectively assessed needs for employment land. Through the sustainable approach for site selection associated with this growth option, there is a positive effect against IA objective 3, as existing land supply sites are primarily located near transport hubs and GM will be able to select additional sites based on most preferred locations.

As both housing and employment land needs are met through this option, Option 2 performs well against reducing deprivation (IA objective 4), promoting equality of opportunity (IA objective 5), and supporting improvements in health and wellbeing (IA objective 6).

With regard to social facilities (IA objective 7) and green infrastructure (IA objective 11), although they are not explicitly mentioned, the strategic and sustainable selection of sites will provide flexibility for GM in identifying the most appropriate land for the varying needs of an area.

Much of the existing land supply is brownfield land or located in an urban area. This growth option will enable GM to identify additional land for development, thus providing an opportunity to focus on the redevelopment of brownfield or derelict locations (IA objective 17).

Enhancement and mitigation

As LHN and objectively assessed need is met already through this option, policy throughout the GMSF should ensure that sustainable transport and climate change adaptation is a focus for new housing and employment provision. This will further strengthen the sustainability and thus resiliency of this growth option.

Utilities and digital providers should be consulted with at the earliest stage of planning, to ensure growth can be adequately supported.

Growth Option 3 – Higher level of growth

Synergies with the IA Framework

Option 3 focuses on a higher growth scenario than what is identified to meet local need. Although this meets, and exceeds, LHN, it is likely to have a negative effect against IA objective 1 due to provision of housing potentially being underutilised. This option would have a positive effect against meeting demand for employment land (IA objective 2); however, due to the rate of growth required, land would be increasingly developed in unsustainable locations and would not be as well-served by infrastructure.

With regard to transport coverage and capacity, this option would not perform well against IA objective 3 as infrastructure would struggle to keep up with the scale of development associated with this option. Additionally, with Option 3, development would be located in unsustainable locations and therefore, less likely to be located near sustainable transport links (IA objective 9).

Although this option would provide increased employment opportunity, in the long-term there would likely be a negative impact on equality of opportunity (IA objective 5) and health and wellbeing (IA objective 6), due to sites being located in inaccessible locations across GM.

Air quality (IA objective 10), green infrastructure (IA objective 11) and climate change impacts (IA objective 12) are likely to see a negative effect over the medium to long-term. Whilst the increased amount of land options could allow more opportunity for green infrastructure and new wildlife locations, the high rate of housing development would put increased pressure on the green infrastructure network. Additionally, the dispersed nature of this growth option would increase greenhouse gas emissions (IA

objective 15) and likely exacerbate transport impact on climate change and air quality.

Enhancement and mitigation

In order to reduce the climate change, air quality and green infrastructure impacts associated with this option, sites should be restricted and focused around sustainable locations across GM. Increasing the placement of sites nearer to transport links would also increase the health and wellbeing of the population, who could be negatively impacted by the unsustainably-located growth in this option.

3.3 IA of spatial options

A total of five spatial options were developed during the preparation of the 2020 draft GMSF. For ease of reference these are listed below:

- Option 1 – Business as Usual (carried forward from 2019);
- Option 2 – Urban Max (carried forward from 2019);
- Option 3 – Public Transport Max (new);
- Option 4 – GMSF 2019 Spatial Option (carried forward from 2019); and;
- Option 5 – Decentralisation / Sub-urbanisation (new).

As previously mentioned in Section 2.2.2, three have been carried forward from the 2019 GMSF and two have been introduced as a result of 2019 GMSF consultation.

Therefore, these will be assessed slightly differently as presented in the following Sections 3.3.1 and 3.3.2.

The assessment is based on information provided in the draft Growth and Spatial Options Report and is based on relative quantum's of development relative to assessed needs, rather than absolute figures.

3.3.1 Independent review of the 2020 spatial options carried forward from 2019 GMSF

This section of the assessment serves as an independent review of three options from the 2019 GMSF IA, which was conducted by GMCA[3]. In essence, GMCA's assessment matrices on the three options which have been brought forward as 2020 spatial options, have been checked as a peer review (see Appendix B for the relevant 2019 IA matrices) and a summary has been provided within this section.

As part of the 2020 IA process, it was determined that an additional IA was not needed at this point in time on these options, as the 2019 IA utilised

[3] Revised Draft GMSF Spatial Options 2019 (January 2019)

the IA Framework. Additionally, the options have not been amended since the GMSF 2019. However, an independent review process has been undertaken to ensure consistency between these options and the appraisal of the newly introduced 2020 spatial options (refer to Section 3.3.2).

For clarity, Table 3 contains the 2019 spatial options and their corresponding 2020 spatial options. The subsequent review summaries are set out as follows:

- Commentary on the 2019 draft GMSF IA for this option;
- Differing assessment conclusion from the 2019 draft GMSF IA for this option; and
- Enhancement and mitigation.

The ‘differing assessment conclusion’ section has been provided to highlight inconsistencies found, if any, between the 2019 draft GMSF IA scoring and this 2020 independent review.

Additionally, enhancement and mitigation suggested is part of the 2020 IA independent review. However, it is considered the enhancement and mitigation can be addressed primarily through the wording of strategic and thematic policies, as noted in the Growth and Spatial Options Report.

Table 3: 2019 / 2020 equivalent GMSF spatial options

2019 spatial option[4]	Corresponding 2020 spatial option[5]
Option 1 – Business as usual This Option projects forward existing development trends. New housing and employment sites are those which are already identified in the baseline housing and employment land supply (SHLAA). The baseline supply includes sites which are allocated in an adopted district Local Plan or which have planning permission. The baseline housing land supply is focused in and around the urban area, including the regional centre (Manchester and Salford), town centres and other locations in and around the urban area. The employment land supply is focused on existing employment locations, with higher density development in the City Centre and the Quays as well as lower density development in locations such as Trafford Park. The business as usual option includes no Green Belt release. **RESIDENTIAL TOTAL – 181,500 units** **INDUSTRY AND WAREHOUSING TOTAL – 2,627,429 sq.m** **OFFICE TOTAL – 2,806,705 sq.m**	**Option 1 – Business as usual** This Option projects forward existing development trends. New housing and employment sites are those which are already identified in the existing housing and employment land supply (as at March 2020) and which have been subject to an optimisation process to ensure efficient use of land. The existing supply includes sites which are allocated in an adopted district Local Plan or which have planning permission. The existing housing land supply is focused in and around the urban area, including the city centre (Manchester and Salford), town centres and other locations in and around the urban area. The employment land supply is focused on existing employment locations, with higher density development in the City Centre and the Quays as well as lower density development in locations such as Trafford Park. The business as usual option includes no Green Belt release.
Option 2 – Urban max Option 2 would maximise housing growth in and around the urban area by significantly increasing densities on sites in the baseline housing land supply in	**Option 2 – Urban max** Option 2 would maximise housing growth in and around the urban area by significantly increasing densities on sites in the existing housing land supply in

[4] Revised Draft GMSF Spatial Options 2019 (January 2019)
[5] GMSF 2020 Growth and Spatial Options Paper (August 2020)

<table>
<tr>
<td>accordance with the density assumptions below. No Green Belt release would be required.

<table>
<tr><th>Location</th><th>Minimum net residential density (dwellings per hectare)</th></tr>
<tr><td>City Centre</td><td>200</td></tr>
<tr><td>Town Centres</td><td>200</td></tr>
<tr><td>Other designated centres</td><td>120</td></tr>
<tr><td>Other locations</td><td>70</td></tr>
</table>

RESIDENTIAL TOTAL – 219,000 units

INDUSTRY AND WAREHOUSING TOTAL – 2,731,000 sq.m

OFFICE TOTAL - 2,807,000 sq.m</td>
<td>accordance with the density assumptions below. Close to a centre is defined as being within 800m of a defined centre boundary. It would use the existing land supply for employment growth. This Option does not anticipate Green Belt release.

<table>
<tr><th>Location</th><th>Minimum net residential density (dwellings per hectare)</th></tr>
<tr><td>City Centre</td><td>200</td></tr>
<tr><td>Town Centres</td><td>200</td></tr>
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<tr><td>Other locations</td><td>70</td></tr>
</table>
</td>
</tr>
<tr>
<td>N/A</td>
<td>Option 3 – Public Transport Max – new option for 2020 responding to 2019 consultation</td>
</tr>
<tr>
<td>Option 6 – Hybrid Growth

The hybrid option is a combination of Option 3, Option 4 and Option 5.

It includes (as set out in Option 3) the optimised baseline housing land supply, as well as sites which are currently outside of the urban area but which are within 800m of a town centre or sustainable public transport hub. This option therefore takes advantage of the most sustainable locations in Greater Manchester.

The option also includes sites which take advantage of existing and planned global assets (Option 5), as well as strategically important locations which have the potential to deliver transformational change (Option 4).</td>
<td>Option 4 – GMSF 2019 Spatial Option

Following the assessment of the spatial options for the 2019 GMSF, this option was chosen as the preferred approach to deliver the distribution of growth across GM because none of the alternative options assessed in 2019 were considered, on their own, to fully deliver the GMSF Vision and Objectives. Also, this option had the least negative impact on economic, social, environmental and health objectives in the 2019 Integrated Assessment appraisal framework. In the 2019 Spatial Options Report this option was identified as a ‘Hybrid Growth Option’ as it combined the ‘Transit City Option’ with the ‘Boosting Northern Competitiveness’ and ‘Sustaining Southern Competitiveness’ spatial options.

In light of the outcome of the assessment in 2019, the fact that this spatial option was the preferred option in 2019 and that no evidence has been put forward to</td>
</tr>
</table>

As well as sites which are close to an area of deprivation where it is considered they could have a regenerative effect on an adjacent area of derivation. This is similar to the proposal in Option 4, but applies to sites across Greater Manchester, not just those in the north. This option requires some Green Belt release. **RESIDENTIAL TOTAL – 201,000 units** **INDUSTRY AND WAREHOUSING TOTAL – 4,220,000 sq.m** **OFFICE TOTAL - 2,460,000 sq.m**	suggest that this is no longer a reasonable alternative, it is proposed to assess the 2019 draft GMSF spatial option as a reasonable alternative for the 2020 draft GMSF, rather than its individual component parts. For the 2020 draft GMSF, this option uses the existing housing land supply at March 2020, which has been subject to an optimisation process, as well as sites which are currently outside of the urban area but which are within 800m of a town centre or sustainable public transport hub. This option therefore takes advantage of the most sustainable locations in Greater Manchester. It does also include sites which take advantage of existing and planned global assets, as well as strategically important locations which have the potential to deliver transformational change. Whilst this option includes areas where new sites could have a regenerative effect on an adjacent area of derivation it does require limited Green Belt release.
N/A	**Option 5 – Decentralisation/sub-urbanisation – new option for 2020 responding to 2019 consultation**

2020 Spatial Option 1 – Business as Usual

Commentary on the 2019 draft GMSF IA for this option

This option utilises existing development trends and land supply; sites are those indicated in the land supply as of March 2020. Although this option would positively support development of brownfield land (IA objective 17), this option would not meet the LHN over the plan period and therefore would have a negative effect on ensuring an appropriate quantity of housing to meet the objectively assessed need as covered by IA objective 1. As such, the effect of the housing shortfall would become increasingly detrimental in the long-term. It is agreed that this effect would be permanent given the assumption that there would be no interventions with this 'business as usual' approach.

In terms of employment land, there would be an undersupply with this spatial option and therefore, a negative effect on employment land as covered by IA objective 2. Similar to the housing criteria, this effect would intensify in the long-term, especially as much of the land in the current land supply already has planning permission.

It is uncertain how this undersupply of housing would affect the mix of types, tenures and size of properties or if this option would ensure land is well-served by physical and social infrastructure. However, Option 1 includes sites which are allocated in adopted district Local Plans so it is considered that these sites should be situated in sustainable locations.

It is agreed that there will be an uncertain effect on promoting equality of opportunity and eliminating discrimination as covered by IA objective 5. As development comes forward, this could link communities together, but further details would need to be considered by each district.

Differing assessment conclusion from the 2019 draft GMSF IA for this option

With regard to health and wellbeing, it is considered that this option could have a positive effect in the medium-term as houses and employment land are developed and providing communities with high-quality housing. However, it is considered that the long-term effect may be uncertain or negative as seen under IA objective 6, which differs from the 2019 IA, due to the fact that if housing and employment land is not meeting demand, that health and wellbeing of communities could be impacted negatively.

Enhancement and mitigation

Mitigation for any housing and employment land undersupply would require a strategic approach to determine where shortfall could be accommodated throughout the 10 GM districts. However, going above and beyond the existing land supply would alter this spatial option significantly.

A strategic transport, social infrastructure, green infrastructure, and educational/training approach could also mitigate any additional pressure on these systems brought about by 'business as usual' seen in Spatial Option 1. Ensuring a strategic approach is taken will allow needs to be assessed across varying areas, to consider where demand is highest, rather than allow the existing land supply to solely determine location of necessary infrastructure.

2020 Spatial Option 2 – Urban Max

Commentary on the 2019 draft GMSF IA for this option

This option was determined to meet the LHN through increasing housing density on existing land supply in urban areas. It would therefore have a positive effect on meeting the objectively assessed need but a negative effect on meeting the appropriate level of housing types/tenures due to the high-density approach required (IA objective 1). It would also use existing urban land supply for employment growth and would therefore have a detrimental impact on meeting future demand for employment land, covered by IA objective 2, as only certain types of sites could be accommodated in the urban environment.

Due to the concentration of development in urban areas, this option will have well-connected sites which link to the existing network, thereby having a positive effect for ensuring transport coverage (IA objective 3). It would also likely reduce deprivation in those urban areas experiencing growth, and therefore have a positive effect on reducing levels of deprivation (IA objective 4); however, this approach may overlook certain deprived areas and potentially increase deprivation elsewhere.

With regard to equality of opportunity and eliminating discrimination (IA objective 5), a focus on urban densification may be likely to increase assess to facilities and infrastructure for those moving into urban areas. However, this densification will have a strong negative effect on access to green space (IA objective 6) as the existing green infrastructure will see a higher number of users from new development.

Option 2 will see a predominantly positive effect on IA objective 9 as this focuses on sustainable modes of transport. Increasing urban density will ensure residents and users of the sites are close to amenities and transport links.

With regard to resilience to climate change (IA objective 12) and flood risk (IA objective 13), this option would demonstrate an uncertain and potentially negative effect in the long-term as increasing urban development will exacerbate the urban heat island effect and could increase flooding. Densification could also have an uncertain or potentially negative long-term effect on conservation of heritage assets in the affected urban areas (IA objective 16). However, densification will ensure land is utilised efficiently and sustainability as many urban sites are

previously developed land; Option 2 will therefore have a positive impact on IA objective 17.

Differing assessment conclusion from the 2019 draft GMSF IA for this option

There have been no identified assessment scores varying from the 2019 IA.

Enhancement and mitigation

Mitigation for lack of housing mix and employment land undersupply would require a strategic approach to determine where shortfall could be accommodated throughout the 10 GM districts. However, going above the existing land supply or developing larger housing options (i.e. needing to develop outside of the urban area) would alter this spatial option significantly.

A strategic transport, utilities, and green infrastructure approach could enhance Option 2 to prevent these networks becoming stressed in the long-term. Ensuring a strategic approach is taken will allow needs to be assessed across varying areas, to consider where demand is highest, rather than allow the existing land supply to determine location of necessary infrastructure. Policy will also need to ensure climate change mitigation, such as for potential urban heat island effects and flood risk associated with this spatial option.

2020 Spatial Option 4 – 2019 draft GMSF Spatial Option

Commentary on the 2019 draft GMSF IA for this option

This option was created as an additional 6th option for the 2019 GMSF following the 2019 IA of spatial options. For the 2020 version of this option, the existing land supply is taken at March 2020.

This 2020 Option 4 strongly aligns with IA objective 1, as it meets the LHN as well as supports delivery of a mix of types, tenures and sizes of dwellings throughout GM. The range of employment locations will also strongly align with meeting future demand (IA objective 2). As the focus is on sites within 800m of a town centre or sustainable transport hub, there is also a positive effect for transport coverage and capacity, as seen in IA objective 3. This option also strongly aligns with IA objective 9 since it innately promotes sustainable modes of transport.

As this option seeks to provide homes and jobs in urban areas and close to town centres or transport hubs, it performs well against reducing deprivation and promoting equality of opportunities (IA objective 5), through connecting deprived areas and people to facilities and infrastructure. It therefore aligns with supporting healthier lifestyles as covered by IA objective 6.

Increased development in areas needing growth would equate to increased developer contributions. Social infrastructure and educational facilities could therefore see a positive effect from such development (IA objective 7). However, as development would be focused on certain sustainable locations, facilities in these areas could experience stress and may struggle to meet demand.

In terms of green infrastructure and biodiversity, Option 4 is likely to have a positive effect on conservation (IA objective 11). However, there could be uncertain biodiversity outcomes in regard to Green Belt release. As with Option 2, Option 4 could exacerbate the urban heat island effect with focusing development in already developed areas, thus increasing energy demand in such areas.

This option aligns strongly with IA objective 17 as it will focus development on brownfield land and sustainable locations.

Differing assessment conclusion from the 2019 GMSF IA for this option

There have been no identified assessment scores varying from the 2019 IA.

Enhancement and mitigation

Mitigation for potential stress on social infrastructure and educational facilities associated with this option could include limited Green Belt release, where new sites would have an overall regenerative effect on a community. To ensure Green Belt release is undertaken sustainably, release should focus on sustainable transport use, discouraging personal car journeys, and conserving the natural environment through creation of new green space elsewhere.

This option could also be enhanced by protecting key townscape and heritage assets through carefully considered design. Protection should also be afforded to versatile agricultural land.

3.3.2 Additional 2020 spatial options

As previously mentioned, as a result of the 2019 draft GMSF consultation, two alternative spatial options were developed for the 2020 draft GMSF. These options are contained in Table 4, followed by the summaries of the assessments. Appendix C contains the 2020 IA matrices associated with these two spatial options.

These summaries are set out as follows:

- Synergies with the IA Framework; and
- Enhancement and mitigation.

It is considered that the enhancement and mitigation recommended can be addressed primarily through the wording of strategic and thematic policies.

Table 4: New spatial options introduced in 2020 draft GMSF.

2020 spatial option[6]
Option 3 – Public Transport Max This option uses the increased density ratios set out in Option 2, however the highest densities would also be applied close to sustainable transport nodes whether within a defined centre or not, with the highest densities being applied close to multi modal sustainable public transport hubs. Close to a sustainable transport node or multi modal hub is defined as being within 800m of that facility. Public transport hubs included in this option are Metrolink stops, Bus Rapid Transit stops and Railway Stations with at least 2 trains per hour. These are considered to be the most sustainable existing locations and development in these areas will take advantage of existing assets close to these transport nodes. This option does not anticipate Green Belt release.
Option 5 – Decentralisation/sub-urbanisation The overall trend of this option would be that growth in the Core Growth Area, in particular the City Centre, would be reduced and redistributed to the edges of the urban area, due to a number of factors, including: • Increased levels of homeworking and the City Centre becoming less of a focus for: work; a place to do business; shopping; retail; leisure; and eating. • Increased role for smaller town centres, local and neighbourhood centres. • Reduced confidence in high density apartment living in the City Centre and trend for people to seek to live on the outskirts of Greater Manchester in low density developments. • New and existing offices downsize and/or relocate to the edge of the urban area in locations accessible predominantly by car. • Increased demand for low density out-of-town retail outlets and leisure destinations that are accessible by car become more popular. • Online retail increases, which in turn creates a greater demand for industry and warehousing floorspace on the outskirts of GM. This option assumes that the anticipated shift away from future growth in the City Centre and the main town centres would see 30% less residential and employment land becoming available in these locations, compared to the March 2020 existing land supply and that growth being redistributed to edge of and beyond the urban area.

[6] GMSF 2020 Growth and Spatial Options Paper (August 2020)

2020 Spatial Option 3 – Public Transport Max

Synergies with the IA Framework

This option seeks to concentrate development in sustainable locations close to transport nodes, whether within a defined centre or not. Although it meets LHN and therefore aligns with IA objective 1, there is some uncertainty whether an appropriate mix of housing will be delivered or whether sites will be well-connected to opportunities. In regard to location of employment land (IA objective 2), this option would limit the size of larger clusters and could have a negative effect on meeting future demand.

As the development trend associated with this option is focused on transport hubs, this option mostly aligns with IA objective 3 in regard to ensuring there is sufficient transport coverage. However, it is uncertain whether utilities and digital infrastructure would be equipped to meet this growth.

IA objective 5 concerns equality of opportunity and eliminating discrimination. Development for Option 3 will be high-density and will have an uncertain effect on fostering good relations between people, as these developments tend to breed antisocial behaviour.

Being situated near transport links will have a positive effect on accessing facilities. However, due to these concentrated areas potentially becoming overdeveloped, this could increase pressure on existing infrastructure, including green spaces, and have a potentially negative effect on health (IA objective 6).

Option 3 performs well against IA objective 9 as it innately promotes sustainable modes of transport due to densifying development near public transport. It also promotes development on previously developed land and in sustainable locations, thus aligning with IA objective 17. However, it is uncertain how this option will affect landscape quality and character of open spaces (IA objective 16).

Enhancement and mitigation

Mitigation for employment undersupply could include considering where these larger, clustered employment sites could be located across GM. However, locating sites away from transport hubs would alter the main premise of this option.

Digital and utilities infrastructure providers should be consulted at the earliest stage of development for this option, to ensure existing networks do not reach capacity with the densification approach.

Policy should emphasise the importance and value of multifunctional green space and should seek to reduce climate impacts (e.g. urban heat island effects) caused by high-density building around existing hubs.

2020 Spatial Option 5 – Decentralisation / Sub-urbanisation

Synergies with the IA Framework

Option 5 seeks to redistribute growth away from the urban Core Growth Area to the edge of the urban area and beyond. Housing and employment land would not be well-connected with this dispersed option. Therefore, a mostly negative effect would be seen against IA objectives 1 and 2.

With regard to transport coverage and capacity, this option would provide scattered settlements, putting increased pressure on the transport network and reducing transport connectivity of sites coming forward (IA objective 3). Social infrastructure (IA objective 7) would also be negatively impacted as a result of this option, as the sprawl of sites would exacerbate the impact in areas already disconnected from such infrastructure.

This development approach would also negatively impact those seeking employment and would be likely to increase disparity and deprivation (IA objective 4) in already deprived wards, further cutting them off from surrounding opportunities. Health and wellbeing (IA objective 6) would see a negative impact through increasing levels of disparity; however, as sites would be located away from urban areas, access to green space would likely see an improvement for new development.

With regard to IA objective 9, Spatial Option 5 would have an increasingly negative impact on the promotion of sustainable transport modes due to the dispersed nature of this option. Private car journeys would likely increase as a result, which would negatively impact emissions (IA objective 15), air quality (IA objective 10) and resilience to climate change effects (IA objective 12).

Previously developed land would be significantly underutilised with this option and therefore, there would be an increasingly detrimental impact over time against IA objective 17.

Enhancement and mitigation

Additional land supply would need to be identified to meet the housing need. A strategic approach should be taken to both housing and employment locations, to ensure sites are well-served by sustainable physical and social infrastructure. Ensuring a strategic approach is taken will allow needs to be assessed across varying areas, to consider where demand is highest, rather than allow the notion of decentralisation to determine location of necessary infrastructure. However, such an approach would amend this spatial option significantly.

Air quality, emissions, and climate change impacts should be mitigated through discussions with TfGM regarding the emerging GM Clean Air Plan.

4 Conclusion

4.1 Summary of options appraisal

Section 3 of this report summarises the IA of both the growth and the spatial options for the 2020 draft GMSF. It also outlines proposed enhancement and mitigation, in order to further strengthen the implementation of the policy.

It is considered that enhancement and mitigation on the preferred options can be taken forward primarily through the implementation of GMSF policies. For completeness, enhancement and mitigation have been included within this report for every option as presented in the 'GMSF 2020 Growth and Spatial Options – Draft for Appraisal' (August 2020).

The key findings from the assessment of the growth and spatial options are summarised below.

4.1.1 Growth options

Option 1 represents business as usual and limits growth to the 2020 existing land supply. This option would prevent GM from meeting both its LHN and its objectively assessed needs for employment land, which would have a negative effect on numerous IA objectives and would prevent sustainable growth across GM.

Option 2 allows identification of sufficient land to meet local needs, thus affording the flexibility to ensure housing and employment land needs are met sustainably across GM throughout the GMSF plan period.

Option 3 involves an increased amount of land in order to provide additional housing and employment opportunity. However, benefit from these aspects could be offset by the decrease in connectivity and increase in detrimental climate change effects associated with this option.

4.1.2 Spatial options

Option 1 represents business as usual and does not meet the LHN or employment land need. It does not anticipate Green Belt release.

Although Option 2 does achieve the LHN through a significant focus on densification in the urban area, this would likely increase pressure on nearby services including green infrastructure. It also does not anticipate Green Belt release.

Option 3, a new option introduced for the 2020 draft GMSF, aims to concentrate development in sustainable locations close to transport nodes, whether within a defined centre or not. Although it does not anticipate Green Belt release and would meet numerical need, similar to Option 2 it would cause increased pressure on the urban area as well as increased pressure in locations surrounding transport hubs.

Option 4 is the hybrid option carried forward from the GMSF 2019. This option would deliver a full range of housing in sustainable locations. Opportunities would generally be maximised, including access to urban green space and employment opportunities.

Option 5, another new option for the 2020 draft GMSF, focuses on moving development away from the Core Growth Area and to the urban fringe, and beyond. This would have a detrimental effect on accessibility and inclusivity, and would also significantly increase private car journeys.

4.2 Mitigation and enhancement

This 2020 Growth and Spatial Options IA Report is an independent IA of the options described above. The following summarises the mitigation and enhancement recommended for the 2020 draft GMSF preferred growth and spatial options.

As explained above, the enhancement and mitigation can be addressed primarily through the wording of strategic and thematic policies. The following therefore provides a commentary on how the 2020 draft GMSF thematic policies address the growth and spatial options recommended mitigation and enhancement.

4.2.1 Growth Option 2: Meeting GM's Local Housing Need (LHN) and employment land Objectively Assessed Needs.

As LHN and objectively assessed need is met already through this option, policy throughout the GMSF should ensure that sustainable transport and climate change adaptation is a focus for new housing and employment provision. This will further strengthen the sustainability and thus resiliency of this growth option.

Utilities and digital providers should be consulted with at the earliest stage of planning, to ensure growth can be adequately supported.

As explained above, it is considered that the mitigation can primarily be delivered through the implementation of the relevant thematic policy.

GM-Strat 14 (A Sustainable and Integrated Transport Network) acknowledges the new development will have in delivering GM's future sustainable and integrated transport network. Whilst it does not explicitly mention housing or employment, it does include all development. Policies GM-N 3 (Public Transport) and GM-N 5 (Walking and Cycling) also reinforce accessibility by non-car modes. Policy GM-N 7 also sets out what is expected of all development in GM with regard to movement.

As noted in the updated 2020 IA Scoping Report, there has been an increase in emphasis on climate change, with all ten GM authorities declaring a climate emergency. It is considered that this issue is covered by policies within the Sustainable and Resilient Greater Manchester

chapter, and with further recommendations made in the 2020 IA, this can be strengthened further.

With regard to the recommendations around working with utility and digital providers, it is considered that this will be primarily achieved through the implementation of GM-N 2 (Digital Connectivity) and GM-D 1 (Infrastructure Implementation). GM authorities at the local level will be able to encourage and facilitate this collaboration.

4.2.2 Spatial Option 4: GMSF 2019 Spatial [Hybrid] Option

Mitigation for potential stress on social infrastructure and educational facilities associated with this option could include limited Green Belt release, where new sites would have an overall regenerative effect on a community. To ensure Green Belt release is undertaken sustainably, release should focus on sustainable transport use, discouraging personal car journeys, and conserving the natural environment through creation of new green space elsewhere.

This option could also be enhanced by protecting key townscape and heritage assets through carefully considered design. Protection should also be afforded to versatile agricultural land.

As explained above, it is considered that the mitigation can primarily be delivered through the implementation of the relevant thematic policy.

Ensuring that Green Belt release focuses on sustainable transport and creation of green space elsewhere is outlined in the relevant thematic policies such as GM-Strat 6, Sustainable transport policies within the Our Network Chapter and A Greener Greater Manchester. Policies within the GMSF additionally seek to ensure land is released in sustainable locations.

Policies throughout the GMSF address design quality and responding to local context, and also heritage conservation and enhancement, in particular Policy GM-E 1 and GM-E 2. Policy GM-G 9 additionally seeks to ensure biodiversity enhancement and to safeguard 'best and most versatile' agricultural land.

4.2.3 Conclusion

A series of mitigation and enhancement recommendations have been made for each option. Those relating to the preferred options can primarily be implemented through the appropriate thematic policies.

Appendix A – 2020 IA matrices on growth options (Arup, August 2020)

See accompanying assessment tables.

Growth Option 1 - Business as ususal

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any specific sensitive receptors where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
1	Provide a sustainable supply of housing land including for an appropriate mix of sizes, types, tenures in locations to meet housing need, and to support economic growth	Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and affordable housing?	-	-	--	D	P	L / GM	Receptors: housing market, local / GM population where sites come forward Affected groups: Housing with an undersupply of green infrastructure is more likely to affect younger people, those already living in deprivation, and those with disabilities. An undersupply of housing and employment land may also disproportionately affect those trying to purchase a first home or trying to get a first job.	Growth Option 1 is 'business as usual', stating that the level of growth (and distribution) should be limited to that being capable of being delivered by the 2020 existing housing and employment land supply. This would not meet GM's Local Housing Need (LHN) over the plan period. It is unknown how this would impact the mix type and tenure in relation to local demand over the medium- and long-term. Current levels of growth and distribution may not support improvements in the resilience of the housing stock over the medium- and long-term.	Could have cumulative socio-economic and environmental effects with other local development schemes.	The level of growth and distribution should be amended to sufficiently meet GM's LHN in order to ensure an appropriate quantity of housing. However, amending these aspects would alter this option significantly.
		Ensure an appropriate mix of types, tenures and sizes of properties in relation to the respective levels of local demand?	o	?	?	D	P	L / GM				None identified
		Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate?	o	?	?	D	P	L / GM				None identified
		Support improvements in the energy efficiency and resilience of the housing stock?	o	? / -	? / -	D	P	L / GM				Consider benefits of strategic approach to allocating housing land to support resilience and efficiency of the housing stock.
2	Provide a sustainable supply of employment land to ensure sustainable economic growth and job creation	Meet current and future demand for employment land across GM?	-	-	--	D	P	L / GM	Receptors: GM population and GM economy Affected groups: widespread effects	Growth Option 1 is 'business as usual', stating that the level of growth (and distribution) should be limited to that being capable of being delivered by the 2020 existing housing and employment land supply. This would not provide sustainable growth of employment land over the plan period, therefore having a negative effect on meeting the demand for employment land. Employment land does not directly affect education and training. However, not meeting the future demand for employment land could potentially have a negative effect on education and training opportunities in the medium- to long-term.	Could have cumulative socio-economic and environmental effects with other local development schemes.	Ensure a strategic approach for selecting most appropriate sites for employment. However, amending land supply beyond 2020 figures would alter this option significantly.
		Support education and training to provide a suitable labour force for future growth?	o	? / -	? / -	I	P	L / GM				None identified
		Provide sufficient employment land in locations that are well-connected and well-served by infrastructure?	o	?	?	D	P	L / GM				Consider distribution of employment land to ensure locations are adequately connected and serviced by infrastructure.
3	Ensure that there is sufficient coverage and capacity of transport and utilities to support growth and development	Ensure that the transport network can support and enable the anticipated scale and spatial distribution of development?	o	+	+	D	P	L / GM	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	Existing sites are predominantly located around sustainable transport hubs. Therefore, this option aligns with this objective.	Could have cumulative socio-economic and environmental effects with other local development schemes.	None identified
		Improve transport connectivity?	o	o	o	D	n/a	n/a				None identified
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development?	o	o	o	D	n/a	n/a				None identified
4	Reduce levels of deprivation and disparity	Reduce the proportion of people living in deprivation?	o	-	-	D	P	L / GM	Receptors: none identified Affected groups: those identified as living in deprivation	This option would limit growth of employment land and does not meet the objectively assessed needs for this land. It could limit employment opportunity and would therefore have a negative effect on the amount of people living in deprivation over the medium- and long-term. Limiting the growth and distribution of employment land may also negatively impact disparity across the domains of IMD.	Link to other initiatives or investments (e.g. apprenticeships, health initiatives, education and/or skills programmes)	Ensure a strategic approach for selecting most appropriate sites for employment. However, amending land supply beyond 2020 figures would alter this option significantly.
		Support reductions in poverty (including child and fuel poverty), deprivation and disparity across the domains of the Indices of Multiple Deprivation?	o	? / -	? / -	I	P	L / GM				None identified
5	Promote equality of opportunity and the elimination of discrimination	Foster good relations between different people?	o	o	o	I	n/a	n/a	Receptors: none identified Affected groups: various, depending on locality	This option would not meet the objectively assessed needs for employment land. Therefore, it would potentially have a negative affect on both ensuring equality of employment opportunity and ensuring that needs of varying areas have been considered equally.	Potential link to other initiatives which seek to integrate communities	None identified
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?	o	-	-	I	P	L / GM				Include provision in this option to re-evaluate land supply site locations in terms of needed access to facilities over time. However, this would alter this option significantly.
		Ensure no discrimination based on 'protected characteristics', as defined in the Equality Act 2010?	o	o	o	I	n/a	n/a				None identified
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	o	-	-	I	P	L / GM				Include provision in this option to re-evaluate land supply site locations in terms of growth of an area over time. However, this would alter this option significantly.
6	Support improved health and wellbeing of the population and reduce health inequalities	Support healthier lifestyles and support improvements in determinants of health?	o	? / -	? / -	I	P	Local / GM	Receptors: built environment, air quality Affected groups: various	Growth Option 1 limits growth to the existing land supply, which would potentially limit opportunities to improve the health of communities over the medium- and long-term. There would be no flexibility in the land supply approach, which would miss an opportunity to select sites based on future need.	Improved health and reduced health inequalities through positive planning and the promotion of green spaces	None identified
		Reduce health inequalities within GM and with the rest of England?	o	? / -	? / -	I	P	L / GM				None identified
		Promote access to green space?	o	o	o	D	n/a	n/a				None identified
7	Ensure access to and provision of appropriate social infrastructure	Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status?	o	-	-	I	P	L / GM	Receptors: GM population Affected groups: all groups will be affected by this	As this option limits growth and distribution to the current land supply, this could put increased pressure on existing social infrastructure. As there would not be opportunity to improve the distribution of land with Option 1, this could negatively impact access to facilities if the facilities themselves were not improved.	Increased access coupled with population growth may present capacity issues	Consider additional sites for the distribution / provision of facilities over the plan period. However, going above the existing land supply would alter this option.
		Ensure sufficient access to educational facilities for all children?	o	o	o	D	n/a	n/a				None identified
		Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?	o	? / -	? / -	I	P	L / GM				Consider additional sites for the distribution / provision of facilities over the plan period. However, going above the existing land supply would alter this option.
8	Support improved educational attainment and skill levels for all	Improve education levels of children in the area, regardless of their background?	o	o	o	I	n/a	n/a	Receptors: GM population and the GM economy Affected groups: various / all	Neutral/no effect against this objective and assessment criteria anticipated	Capacity issues if facilities are not developed at same rate as residential developments	None identified
		Improve educational and skill levels of the population of working age?	o	o	o	I	n/a	n/a				None identified
9	Promote sustainable modes of transport	Reduce the need to travel and promote efficient patterns of movement?	o	o	o	D	n/a	n/a	Receptors: GM population, transport network Affected groups: Various	Neutral/no effect against this objective and assessment criteria anticipated	Changes in travel patterns as people begin to take advantage of public transport as their main form of transport	None identified
		Promote a safe and sustainable public transport network that reduces reliance on private motor vehicles?	o	o	o	D	n/a	n/a				None identified
		Support the use of sustainable and active modes of transport?	o	o	o	D	n/a	n/a				None identified
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	o	o	o	D	n/a	n/a	Receptors: the atmosphere Affected groups: those affected by poor AQ (see living environment deprivation (outdoor))	Neutral/no effect against this objective and assessment criteria anticipated	Increased trips by private motor vehicle will worsen the air quality over time if sustainable modes are not utilised	None identified
11	Conserve and enhance biodiversity, green infrastructure	Provide opportunities to enhance new and existing wildlife and geological sites?	o	o	o	D	n/a	n/a	Receptors: wildlife, landscapes and green spaces Affected groups: Various	Growth Option 1 is focused on the existing land supply. This could have a negative effect on the availability of land to create new green infrastructure, which would put stress on existing green infrastructure.	Impact on biodiversity assets may occur in conjunction with other developments	None identified
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	o	o	o	D	n/a	n/a				None identified

11	green infrastructure and geodiversity assets	Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure?	o	-	-	D	P	L / GM				Ensure a strategic approach is taken across GM to identify existing multifunctional GI assets and to identify land to create new GI.
		Ensure access to green infrastructure providing opportunities for recreation, amenity and tranquillity?	o	? / -	? / -	D	P	L / GM				As above
12	Ensure communities, developments and infrastructure are resilient to the effects of expected climate change	Ensure that communities, existing and new developments and infrastructure systems are resilient to the predicted effects of climate change across GM?	o	? / -	? / -	D / I	P	Local / GM	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	As a large amount of the existing land supply already has agreed planning permission, Option 1 would not necessarily be able to ensure that communities or development are resilient to climate change.	Increased urban heat island effect and flood risk in combination with other development	Include provision in this option to consider land supply in terms of climate change effects over the plan period. However, selecting land for development over the existing land supply would alter the option significantly.
13	Reduce the risk of flooding to people and property	Restrict the development of property in areas of flood risk?	o	o	o	D	n/a	n/a	Receptors: flood risk areas Affected groups: residents in or near to flood risk areas	Neutral/no effect against this objective and assessment criteria anticipated	Other development which may affect flood risk and increase likelihood of flooding	None identified
		Ensure adequate measures are in place to manage existing flood risk?	o	o	o	D	n/a	n/a				None identified
		Ensure that development does not increase flood risk due to increased run-off rates?	o	o	o	D	n/a	n/a				None identified
		Ensure development is appropriately future proof to accommodate future levels of flood risk including from climate change?	o	o	o	D	n/a	n/a				None identified
14	Protect and improve the quality and availability of water resources	Encourage compliance with the Water Framework Directive?	o	o	o	I	n/a	n/a	Receptors: water courses, ground water, water supplies Affected groups: Various	Neutral/no effect against this objective and assessment criteria anticipated	Both quality and availability of water resources may be impacted by other development	None identified
		Promote management practices that will protect water features from pollution?	o	o	o	D	n/a	n/a				None identified
		Avoid consuming greater volumes of water resources than are available to maintain a healthy environment?	o	o	o	D	n/a	n/a				None identified
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas emissions	Encourage reduction in energy use and increased energy efficiency?	o	o	o	D	n/a	n/a	Receptors: Climate Affected groups: All	Neutral/no effect against this objective and assessment criteria anticipated	GI will help mitigate the increased greenhouse gas emissions are more developments are built	None identified
		Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments?	o	o	o	D	n/a	n/a				None identified
		Promote a proactive reduction in direct and indirect greenhouse gas emissions emitted across GM?	o	o	o	D	n/a	n/a				None identified
16	Conserve and/or enhance landscape, townscape, heritage assets and their setting and the character of GM	Improve landscape quality and the character of open spaces and the public realm?	o	o	o	D	n/a	n/a	Receptors: protected landscapes and/or built heritage assets. Protected or locally significant views Affected groups: None identified	Neutral/no effect against this objective and assessment criteria anticipated	Landscape and heritage may be eroded over time as development comes forward	None identified
		Conserve and enhance the historic environment, heritage assets and their setting?	o	o	o	D	n/a	n/a				None identified
		Respect, maintain and strengthen local character and distinctiveness?	o	o	o	D	n/a	n/a				None identified
17	Ensure that land resources are allocated and used in an efficient and sustainable manner to meet the housing and employment needs of GM, whilst reducing land contamination	Support the development of previously developed land and other sustainable locations?	+	? / +	? / +	D	P	L / GM	Receptors: greenfield and brownfield land Affected groups: None identified	A larger proportion of the existing land supply is either brownfield land, within the urban area, or both. Therefore, this option would support the development of previously developed land. However, as the land is limited to the 2020 supply, this would prevent identifying new, sustainable locations in which to develop.	Loss of greenfield land as it is developed incrementally	Consider inclusion of land which will become derelict / brownfield during the plan period.
		Protect the best and most versatile agricultural land / soil resources from inappropriate development?	o	o	o	D	n/a	n/a				None identified
		Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses?	o	o	o	D	n/a	n/a				None identified
		Support reductions in land contamination through the remediation and reuse of previously developed land?	o	o	o	D	n/a	n/a				None identified
18	Promote sustainable consumption of resources and support the implementation of the waste hierarchy	Support the sustainable use of physical resources?	o	o	o	D	n/a	n/a	Receptors: waste disposal facilities, finite resources. Affected groups: All those in new development	Neutral/no effect against this objective and assessment criteria anticipated	Waste generation with other schemes; intradevelopment effects as a number of locations are taken forward	None identified
		Promote movement up the waste hierarchy?	o	o	o	D	n/a	n/a				None identified
		Promote reduced waste generation rates?	o	o	o	D	n/a	n/a				None identified

Growth Option 2 - Objectively Assessed Needs (OAN)

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input	
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)								
1	Provide a sustainable supply of housing land including for an appropriate mix of sizes, types, tenures in locations to meet housing need, and to support economic growth	Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and affordable housing?	o	+	++	D	P	L / GM	Receptors: housing market, local / GM population where sites come forward Affected groups: Housing with an undersupply of green infrastructure is more likely to affect younger people, those already living in deprivation, and those with disabilities. An undersupply of housing and employment land may also disproportionately affect those trying to purchase a first home or trying to get a first job.	Growth Option 2 meets the LHN and affords flexibility in terms of delivery. This option will therefore have a strong positive effective on ensure the right quantity of housing is provided for the market. It is possible that if housing need is met, that there would be an increased focus in energy efficiency and resilience of the housing stock over time.	Could have cumulative socio-economic and environmental effects with other local development schemes.	None identified	
		Ensure an appropriate mix of types, tenures and sizes of properties in relation to the respective levels of local demand?	o	+	+	D	P	L / GM				None identified	
		Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate?	o	+	+	D	P	L / GM				None identified	
		Support improvements in the energy efficiency and resilience of the housing stock?	o	? / +	? / +	D	P	L / GM				Ensure policy supports renewable energy and climate change mitigation, in order to increase resiliency of the housing stock	
2	Provide a sustainable supply of employment land to ensure sustainable economic growth and job creation	Meet current and future demand for employment land across GM?	o	+	++	D	P	L / GM	Receptors: GM population and GM economy Affected groups: widespread effects	This option meets the employment land needs for GM over the plan period and therefore performs well against this objective.	Could have cumulative socio-economic and environmental effects with other local development schemes.	None identified	
		Support education and training to provide a suitable labour force for future growth?	o	+	+	I	P	L / GM				Ensure policy identifies opportunities to link up employment with training facilities / apprenticeships	
		Provide sufficient employment land in locations that are well-connected and well-served by infrastructure?	o	+	+	D	P	L / GM				None identified	
3	Ensure that there is sufficient coverage and capacity of transport and utilities to support growth and development	Ensure that the transport network can support and enable the anticipated scale and spatial distribution of development?	o	+	+	D	P	L / GM	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	This option mainly consists of land around existing sustainable hubs, and also provides for the ability to select new sites based on need. Therefore, there is an anticipated positive effect against this objective, as this enables sites to come forward sustainably.	Could have cumulative socio-economic and environmental effects with other local development schemes.	None identified	
		Improve transport connectivity?	o	+	+	D	P	L / GM				None identified	
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development?	o	o	o	D	n/a	n/a				Ensure that utilities and digital service providers are consulted at the earliest stage in planning, in order to ensure capacity and coverage is adequate for this growth option.	
4	Reduce levels of deprivation and disparity	Reduce the proportion of people living in deprivation?	o	+	++	D	P	L / GM	Receptors: none identified Affected groups: those identified as living in deprivation	As this option meets the LHN and objectively assessed needs for employment land, it would provide sufficient opportunity for those seeking employment. It would therefore have a positive effect against this objective.	Link to other initiatives or investments (e.g. apprenticeships, health initiatives, education and/or skills programmes)	None identified	
		Support reductions in poverty (including child and fuel poverty), deprivation and disparity across the domains of the Indices of Multiple Deprivation?	o	? / +	? / +	I	P	L / GM				None identified	
5	Promote equality of opportunity and the elimination of discrimination	Foster good relations between different people?	o	o	o	I	n/a	n/a	Receptors: none identified Affected groups: various, depending on locality	As this option meets the LHN and objectively assessed needs for employment land, it would provide sufficient opportunity for those seeking employment. It would allow site selection based on need and would thus enable inequalities to be reduced across GM. It would therefore have a positive effect against this objective.	Potential link to other initiatives which seek to integrate communities	None identified	
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?	o	+	+	I	P	L / GM				None identified	
		Ensure no discrimination based on 'protected characteristics', as defined in the Equality Act 2010?	o	o	o	I	n/a	n/a				None identified	
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	o	+	+	I	P	L / GM				None identified	
6	Support improved health and wellbeing of the population and reduce health inequalities	Support healthier lifestyles and support improvements in determinants of health?	o	+	+	I	P	L / GM	Receptors: built environment, air quality Affected groups: various	Growth Option 2 meets the objectively assessed needs of GM by allowing GM to identify sufficient land for delivery. Therefore, it would have a positive effect against this objective by focusing growth in sustainable, and ultimately healthy, locations.	Improved health and reduced health inequalities through positive planning and the promotion of green spaces	None identified	
		Reduce health inequalities within GM and with the rest of England?	o	+	+	I	P	L / GM				None identified	
		Promote access to green space?	o	o	o	D	n/a	n/a				None identified	
7	Ensure access to and provision of appropriate social infrastructure	Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status?	o	? / +	? / +	I	P	L / GM	Receptors: GM population Affected groups: all groups will be affected by this	Growth Option 2 meets the objectively assessed needs of GM by allowing GM to identify sufficient land for delivery. Therefore, it would potentially have a positive effect against this objective by focusing growth in sustainable, and ultimately healthy, locations.	Increased access coupled with population growth may present capacity issues	Ensure social infrastructure provision is adequately covered through policy	
		Ensure sufficient access to educational facilities for all children?	o	o	o	D	n/a	n/a				None identified	
		Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?	o	? / +	? / +	I	P	L / GM				Ensure social infrastructure provision is adequately covered through policy	
8	Support improved educational attainment and skill levels for all	Improve education levels of children in the area, regardless of their background?	o	o	o	I	n/a	n/a	Receptors: GM population and the GM economy Affected groups: various / all	Neutral/no effect against this objective and assessment criteria anticipated	Capacity issues if facilities are not developed at same rate as residential developments	None identified	
		Improve educational and skill levels of the population of working age?	o	o	o	I	n/a	n/a				None identified	
9	Promote sustainable modes of transport	Reduce the need to travel and promote efficient patterns of movement?	o	+	+	D	P	L / GM	Receptors: GM population, transport network Affected groups: Various	Sites are primarily located near sustainable hubs and GM will be enabled to select additional sites based on existing transport options in an area. Therefore, there is a positive effect against this objective.	Changes in travel patterns as people begin to take advantage of public transport as their main form of transport	None identified	
		Promote a safe and sustainable public transport network that reduces reliance on private motor vehicles?	o	o	o	D	n/a	n/a				None identified	
		Support the use of sustainable and active modes of transport?	o	o	o	D	n/a	n/a				None identified	
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	o	o	o	D	n/a	n/a	Receptors: the atmosphere Affected groups: those affected by poor AQ (see living environment deprivation (outdoor))	Neutral/no effect against this objective and assessment criteria anticipated	Increased trips by private motor vehicle will worsen the air quality over time if sustainable modes are not utilised	None identified	
11	Conserve and enhance biodiversity, green infrastructure and geodiversity assets	Provide opportunities to enhance new and existing wildlife and geological sites?	o	o	o	D	n/a	n/a	Receptors: wildlife, landscapes and green spaces Affected groups: Various	Growth Option 2 affords flexibility in selecting sustainable site locations and could potentially have a positive effect in the provision of green infrastructure across GM.	Impact on biodiversity assets may occur in conjunction with other developments	None identified	
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	o	o	o	D	n/a	n/a				None identified	
		Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure?	o	? / +	? / +	D	P	L / GM				None identified	
		Ensure access to green infrastructure providing opportunities for recreation, amenity and tranquillity?	o	? / +	? / +	D	P	L / GM				None identified	
12	Ensure communities, developments and infrastructure are resilient to the effects of expected climate change	Ensure that communities, existing and new developments and infrastructure systems are resilient to the predicted effects of climate change across GM?	o	? / +	? / +	D / I	P	Local / GM	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	Growth Option 2 affords flexibility in selecting site locations and could potentially have a positive effect in ensure sites are in the most sustainable locations in regard to predicted climate change impacts.	Increased urban heat island effect and flood risk in combination with other development	Ensure policy includes provision for both climate change mitigation and adaptation	
13	Reduce the risk of flooding to people and property	Restrict the development of property in areas of flood risk?	o	o	o	D	n/a	n/a	Receptors: flood risk areas Affected groups: residents in or near to flood risk areas	Neutral/no effect against this objective and assessment criteria anticipated	Other development which may affect flood risk and increase likelihood of flooding	None identified	
		Ensure adequate measures are in place to manage existing flood risk?	o	o	o	D	n/a	n/a				None identified	
		Ensure that development does not increase flood risk due to increased run-off rates?	o	o	o	D	n/a	n/a				None identified	
		Ensure development is appropriately future proof to accommodate future levels of flood risk including from climate change?	o	o	o	D	n/a	n/a				None identified	

14	Protect and improve the quality and availability of water resources	Encourage compliance with the Water Framework Directive?	o	o	o	I	n/a	n/a	Receptors: water courses, ground water, water supplies Affected groups: Various	Neutral/no effect against this objective and assessment criteria anticipated	Both quality and availability of water resources may be impacted by other development	None identified	
		Promote management practices that will protect water features from pollution?	o	o	o	D	n/a	n/a				None identified	
		Avoid consuming greater volumes of water resources than are available to maintain a healthy environment?	o	o	o	D	n/a	n/a				None identified	
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas emissions	Encourage reduction in energy use and increased energy efficiency?	o	o	o	D	n/a	n/a	Receptors: Climate Affected groups: All	Neutral/no effect against this objective and assessment criteria anticipated	GI will help mitigate the increased greenhouse gas emissions are more developments are built	None identified	
		Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments?	o	o	o	D	n/a	n/a				None identified	
		Promote a proactive reduction in direct and indirect greenhouse gas emissions emitted across GM?	o	o	o	D	n/a	n/a				None identified	
16	Conserve and/or enhance landscape, townscape, heritage assets and their setting and the character of GM	Improve landscape quality and the character of open spaces and the public realm?	o	o	o	D	n/a	n/a	Receptors: protected landscapes and/or built heritage assets. Protected or locally significant views Affected groups: None identified	Neutral/no effect against this objective and assessment criteria anticipated	Landscape and heritage may be eroded over time as development comes forward	None identified	
		Conserve and enhance the historic environment, heritage assets and their setting?	o	o	o	D	n/a	n/a				None identified	
		Respect, maintain and strengthen local character and distinctiveness?	o	o	o	D	n/a	n/a				None identified	
17	Ensure that land resources are allocated and used in an efficient and sustainable manner to meet the housing and employment needs of GM, whilst reducing land contamination	Support the development of previously developed land and other sustainable locations?	+	+	++	D	P	L / GM	Receptors: greenfield and brownfield land Affected groups: None identified	A larger proportion of the existing land supply is either brownfield land, within the urban area, or both. This option will also allow further identification of brownfield land. Therefore, this option would show a positive effect against this objective.	Loss of greenfield land as it is developed incrementally	Consider inclusion of land which will become derelict / brownfield during the plan period.	
		Protect the best and most versatile agricultural land / soil resources from inappropriate development?	o	o	o	D	n/a	n/a				None identified	
		Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses?	o	o	o	D	n/a	n/a				None identified	
		Support reductions in land contamination through the remediation and reuse of previously developed land?	o	o	o	D	n/a	n/a				None identified	
18	Promote sustainable consumption of resources and support the implementation of the waste hierarchy	Support the sustainable use of physical resources?	o	o	o	D	n/a	n/a	Receptors: waste disposal facilities, finite resources. Affected groups: All those in new development	Neutral/no effect against this objective and assessment criteria anticipated	Waste generation with other schemes; intradevelopment effects as a number of locations are taken forward	None identified	
		Promote movement up the waste hierarchy?	o	o	o	D	n/a	n/a				None identified	
		Promote reduced waste generation rates?	o	o	o	D	n/a	n/a				None identified	

Growth Option 3 - Higher Level of Growth

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
1	Provide a sustainable supply of housing land including for an appropriate mix of sizes, types, tenures in locations to meet housing need, and to support economic growth	Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and affordable housing?	? / -	? / -	-	D	P	L / GM	Receptors: housing market, local / GM population where sites come forward Affected groups: Housing with an undersupply of green infrastructure is more likely to affect younger people, those already living in deprivation, and those with disabilities. An undersupply of housing and employment land may also disproportionately affect those trying to purchase a first home or trying to get a first job.	Growth Option 3 provides housing land beyond the identified need. Especially in regard to the current pandemic, provision of additional and unneeded land would have an uncertain but likely negative effect in the long-term. Provision would be underutilised and would likely negatively impact the resilience of the housing stock.	Could have cumulative socio-economic and environmental effects with other local development schemes.	Identify the housing need based on local requirements
		Ensure an appropriate mix of types, tenures and sizes of properties in relation to the respective levels of local demand?	o	?	?	D	P	L / GM				As above
		Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate?	o	?	?	D	P	L / GM				Ensure a strategic approach is taken to selecting most appropriate sites across GM
		Support improvements in the energy efficiency and resilience of the housing stock?	o	-	-	D	P	L / GM				Ensure a sustainable amount of housing is provided for, in order to increase resiliency of the supply
2	Provide a sustainable supply of employment land to ensure sustainable economic growth and job creation	Meet current and future demand for employment land across GM?	+	? / +	? / +	D	P	L / GM	Receptors: GM population and GM economy Affected groups: widespread effects	This option would exceed the need for employment land which could have a positive effect in regard to meeting demand; however, the saturation of sites would have an uncertain effect in the longer term. Additionally, in order to meet this level of demand, as time goes on less focus would be afforded on sustainable locations.	Could have cumulative socio-economic and environmental effects with other local development schemes.	A strategic approach should be taken to identify employment land to ensure a saturation of sites does not cause sites to fall into disrepair
		Support education and training to provide a suitable labour force for future growth?	o	+	? / +	I	P	L / GM				Emphasise linking employment opportunity with apprenticeship and training schemes
		Provide sufficient employment land in locations that are well-connected and well-served by infrastructure?	o	?	? / -	D	P	L / GM				Ensure a strategic approach is taken to site selection in order to ensure sites are connected to infrastructure
3	Ensure that there is sufficient coverage and capacity of transport and utilities to support growth and development	Ensure that the transport network can support and enable the anticipated scale and spatial distribution of development?	o	-	--	D	n/a	n/a	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	Growth Option 3 is concerned with exceeding the identified need of sites across GM. As the sustainable locations are developed over time, there would be an increasingly negative effect on both transport coverage and capacity keeping up with the scale of development.	Could have cumulative socio-economic and environmental effects with other local development schemes.	Consult TfGM at the earliest stage to ensure the network can support the predicted level of growth
		Improve transport connectivity?	o	-	--	D	n/a	n/a				As above
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development?	o	-	-	D	n/a	n/a				Consult utilities and digital services providers as early as possible to ensure infrastructure can support expected growth
4	Reduce levels of deprivation and disparity	Reduce the proportion of people living in deprivation?	o	-	-	D	P	L / GM	Receptors: none identified Affected groups: those identified as living in deprivation	This growth option will exceed employment land need. However, as sustainably-located land is developed, more unsustainable locations will be sought. This decrease in connectivity of employment land would likely negatively impact those seeking employment, and therefore have a negative effect in the reduction of deprivation across GM.	Link to other initiatives or investments (e.g. apprenticeships, health initiatives, education and/or skills programmes)	Ensure a strategic approach for selecting most appropriate sites for employment
		Support reductions in poverty (including child and fuel poverty), deprivation and disparity across the domains of the Indices of Multiple Deprivation?	o	? / -	? / -	I	P	L / GM				None identified
5	Promote equality of opportunity and the elimination of discrimination	Foster good relations between different people?	o	? / -	-	I	n/a	n/a	Receptors: none identified Affected groups: various, depending on locality	This growth option will exceed employment and housing land need. However, as sustainably-located land is developed, more unsustainable locations will be sought. This decrease in connectivity of land would likely negatively impact communities, and therefore have a negative effect in the elimination of discrimination across GM.	Potential link to other initiatives which seek to integrate communities	A strategic approach should be taken in order to ensure sustainable locations are sought for housing and employment land
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?	o	? / -	-	I	P	L / GM				As above
		Ensure no discrimination based on 'protected characteristics', as defined in the Equality Act 2010?	o	o	o	I	n/a	n/a				None identified
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	o	-	-	I	P	L / GM				A strategic approach should be taken in order to ensure sustainable locations are sought for housing and employment land
6	Support improved health and wellbeing of the population and reduce health inequalities	Support healthier lifestyles and support improvements in determinants of health?	o	? / -	? / -	I	P	Local / GM	Receptors: built environment, air quality Affected groups: various	Although this option would allow for an increased number of sites to be identified, and therefore the potential for additional employment opportunities and green infrastructure sites, the number of sites exceeding local need is likely to have a long-term detrimental effect against health and wellbeing. Unsustainable site locations will increase private car journeys and decrease connectivity of communities, thus increasing health inequalities across GM.	Improved health and reduced health inequalities through positive planning and the promotion of green spaces	Ensure a strategic approach is taken to identifying sustainable land across GM
		Reduce health inequalities within GM and with the rest of England?	o	? / -	? / -	I	P	L / GM				As above
		Promote access to green space?	o	?	?	D	P	L / GM				As above
7	Ensure access to and provision of appropriate social infrastructure	Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status?	o	-	-	I	P	L / GM	Receptors: GM population Affected groups: all groups will be affected by this	Although this option includes provision for an increased number of sites, this could put increased pressure on existing social infrastructure. As development will be allowed in unsustainable locations in order to meet the level of growth, this could negatively impact access to facilities.	Increased access coupled with population growth may present capacity issues	Emphasise a strategic approach to site selection for social facilities
		Ensure sufficient access to educational facilities for all children?	o	o	o	D	n/a	n/a				As above
		Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?	o	? / -	? / -	I	P	L / GM				As above
8	Support improved educational attainment and skill levels for all	Improve education levels of children in the area, regardless of their background?	o	o	o	I	n/a	n/a	Receptors: GM population and the GM economy Affected groups: various / all	Neutral/no effect against this objective and assessment criteria anticipated	Capacity issues if facilities are not developed at same rate as residential developments	None identified
		Improve educational and skill levels of the population of working age?	o	o	o	I	n/a	n/a				None identified
9	Promote sustainable modes of transport	Reduce the need to travel and promote efficient patterns of movement?	o	-	-	D	P	L / GM	Receptors: GM population, transport network Affected groups: Various	Growth Option 3 focuses on higher growth; therefore, a larger proportion of sites will be situated in unsustainable locations, far from transport hubs. There will be a negative impact against this objective.	Changes in travel patterns as people begin to take advantage of public transport as their main form of transport	Focus site selection on locations near sustainable transport links
		Promote a safe and sustainable public transport network that reduces reliance on private motor vehicles?	o	o	o	D	n/a	n/a				None identified
		Support the use of sustainable and active modes of transport?	o	-	-	D	P	L / GM				Focus site selection on locations near sustainable transport links
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	o	? / -	? / -	D	P	L / GM	Receptors: the atmosphere Affected groups: those affected by poor AQ (see living environment deprivation (outdoor))	The increased housing and employment offering will provide increased opportunity for carbon neutrality; however, the increased number of sites situated in sustainable locations could potentially negatively impact the AQ across GM.	Increased trips by private motor vehicle will worsen the air quality over time if sustainable modes are not utilised	Ensure a strategic approach is taken to select sites near sustainable transport links
11	Conserve and enhance biodiversity, green infrastructure and geodiversity assets	Provide opportunities to enhance new and existing wildlife and geological sites?	o	?	?	D	P	L / GM	Receptors: wildlife, landscapes and green spaces Affected groups: Various	Growth Option 3 provides an increased number of sites for development, which could afford the opportunity to improve existing biodiversity. However, additional housing could pose increased pressure on wildlife and geological sites across GM.	Impact on biodiversity assets may occur in conjunction with other developments	GMSF policy should afford protection to wildlife and geological sites
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	o	?	?	D	P	L / GM				As above
		Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure?	o	? / -	? / -	D	P	L / GM				Adequate provision should be made for multifunctional GI across GM
		Ensure access to green infrastructure providing opportunities for recreation, amenity and tranquillity?	o	? / -	? / -	D	P	L / GM				As above
12	Ensure communities, developments and infrastructure are resilient to the effects of expected climate change	Ensure that communities, existing and new developments and infrastructure systems are resilient to the predicted effects of climate change across GM?	o	? / -	? / -	D / I	P	Local / GM	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	Increased housing and employment would provide significant opportunity to improve the resiliency of housing and employment sites. However, dispersed growth could potentially increase the detrimental effect of GM's development against climate change considerations.	Increased urban heat island effect and flood risk in combination with other development	Include provision in this option to consider land supply in terms of climate change effects over the plan period

13	Reduce the risk of flooding to people and property	Restrict the development of property in areas of flood risk?	o	o	o	D	n/a	n/a	Receptors: flood risk areas Affected groups: residents in or near to flood risk areas	Neutral/no effect against this objective and assessment criteria anticipated	Other development which may affect flood risk and increase likelihood of flooding	None identified
		Ensure adequate measures are in place to manage existing flood risk?	o	o	o	D	n/a	n/a				None identified
		Ensure that development does not increase flood risk due to increased run-off rates?	o	o	o	D	n/a	n/a				None identified
		Ensure development is appropriately future proof to accommodate future levels of flood risk including from climate change?	o	o	o	D	n/a	n/a				None identified
14	Protect and improve the quality and availability of water resources	Encourage compliance with the Water Framework Directive?	o	o	o	I	n/a	n/a	Receptors: water courses, ground water, water supplies Affected groups: Various	Neutral/no effect against this objective and assessment criteria anticipated	Both quality and availability of water resources may be impacted by other development	None identified
		Promote management practices that will protect water features from pollution?	o	o	o	D	n/a	n/a				None identified
		Avoid consuming greater volumes of water resources than are available to maintain a healthy environment?	o	o	o	D	n/a	n/a				None identified
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas emissions	Encourage reduction in energy use and increased energy efficiency?	o	? / -	? / -	D	P	L / GM	Receptors: Climate Affected groups: All	Increased housing and employment would provide significant opportunity to improve the resiliency of housing and employment sites, and could afford opportunity to develop renewable energy sites. However, dispersed growth could potentially increase the detrimental effect of GM's development against GHG emissions.	GI will help mitigate the increased greenhouse gas emissions are more developments are built	Include provision in GMSF policy to consider land supply in terms of climate change effects over the plan period
		Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments?	o	? / +	? / +	D	P	L / GM				Policy should ensure adequate renewable energy options across GM
		Promote a proactive reduction in direct and indirect greenhouse gas emissions emitted across GM?	o	? / -	? / -	D	P	L / GM				Policy should actively support GHG reduction across multiple sectors
16	Conserve and/or enhance landscape, townscape, heritage assets and their setting and the character of GM	Improve landscape quality and the character of open spaces and the public realm?	o	? / -	? / -	D	P	L / GM	Receptors: protected landscapes and/or built heritage assets. Protected or locally significant views Affected groups: None identified	As growth is accelerated in this option, there will be an uncertain or potentially negative affect against the landscape and townscape. Higher amounts of growth could put increased pressure on the conservation of assets and local character.	Landscape and heritage may be eroded over time as development comes forward	Ensure policy supports enhancing landscape as development comes forward
		Conserve and enhance the historic environment, heritage assets and their setting?	o	? / -	? / -	D	P	L / GM				Emphasise the conservation of heritage assets through relevant policy
		Respect, maintain and strengthen local character and distinctiveness?	o	?	?	D	P	L / GM				Ensure local character is maintained through the provision of design codes in each district
17	Ensure that land resources are allocated and used in an efficient and sustainable manner to meet the housing and employment needs of GM, whilst reducing land contamination	Support the development of previously developed land and other sustainable locations?	-	? / -	? / -	D	P	L / GM	Receptors: greenfield and brownfield land Affected groups: None identified	In order to meet the higher growth associated with this option, focus may shift away from brownfield land or land requiring remediation to greenfield land which would be more ready for development. Therefore, there is likely a negative effect against this objective.	Loss of greenfield land as it is developed incrementally	Consider a primary focus on brownfield land for this option
		Protect the best and most versatile agricultural land / soil resources from inappropriate development?	o	? / -	? / -	D	P	L / GM				As above
		Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses?	o	?	?	D	P	L / GM				Include policy which supports redevelopment of derelict land and infrastructure
		Support reductions in land contamination through the remediation and reuse of previously developed land?	o	?	?	D	P	L / GM				Consider a primary focus on brownfield land for this option
18	Promote sustainable consumption of resources and support the implementation of the waste hierarchy	Support the sustainable use of physical resources?	o	o	o	D	n/a	n/a	Receptors: waste disposal facilities, finite resources. Affected groups: All those in new development	Neutral/no effect against this objective and assessment criteria anticipated	Waste generation with other schemes; intradevelopment effects as a number of locations are taken forward	None identified
		Promote movement up the waste hierarchy?	o	o	o	D	n/a	n/a				None identified
		Promote reduced waste generation rates?	o	o	o	D	n/a	n/a				None identified

Appendix B – 2019 IA matrices (January 2019) on 3 spatial options brought forward from 2019 GMSF

See accompanying assessment tables.

2019 Spatial Option 1 – Business as Usual

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
1	Provide a sustainable supply of housing land including for an appropriate mix of sizes, types, tenures in locations to meet housing need, and to support economic growth	Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and affordable housing?	-	-	--	D	P	Local / GM	Receptors: housing market, local / GM population where sites come forward Affected groups: Housing with an undersupply of green infrastructure is more likely to affect those already living in deprivation and with disabilities	Option 1 will not deliver the LHN for GM. Effects would persist long enough to be considered permanent (assuming there is no intervention). The shortfall would be intensified over time. Details around delivery of housing types and tenures are unknown. It is assumed that local demand will be met in certain areas for certain types of housing where the market is strong. However, when the supply has been used up this will lead to pressure on greenfield land in an unplanned way and potentially unsustainable way. There is uncertainty about affordable housing as this will be dealt with through individual district Local Plans, with a local policy based on each district's need. The spatial location of housing is unlikely to have significant impacts on energy efficiency and resilience of housing stock	Potential effects with other local development schemes which have not been captured by the GMSF (e.g. smaller schemes which come forward over the plan period).	The LHN will not be met under this option.
		Ensure an appropriate mix of types, tenures and sizes of properties in relation to the respective levels of local demand?	o	? / -	? / -	D	P	Local / GM				A strategic evidence-based approach to stimulate investment in under-supplied housing types and tenures.
		Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate?	o	?	?	D	P	Local / GM				Effects against this criteria are unknown, but are likely to be mixed with some development being well connected. The GMSF should ensure coverage of this objective in policy.
		Support improvements in the energy efficiency and resilience of the housing stock?	o	o / +	o / +	D	P	Local / GM				GMSF should ensure coverage of this objective in policy. Such policy might require the drawing up of energy assessments for new developments of a certain size. Include in design guide recommendation.
2	Provide a sustainable supply of employment land to ensure sustainable economic growth and job creation	Meet current and future demand for employment land across GM?	-	--	--	D	P	Local / GM	Receptors: GM population and GM economy Affected groups: widespread effects	Employment land will come forward as part of existing permissions and allocations in the existing supply. This would deliver GM required office space but will result in an under-supply of industrial/warehousing space. The approach does not directly support education and training although any net increase in employment will result in a marginal increase in training and up-skilling over the long term. Overall,	Could have cumulative socio-economic and environmental effects with other local development schemes.	Consult with individual districts on where the shortfall might be accommodated
		Support education and training to provide a suitable labour	o	o	o	n/a	n/a	GM				GMSF policy should seek to maximise education and skills potential. Strategic mapping of existing and future employment requirements (in

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		force for future growth?								this is a positive effect against the assessment criteria. The lack of strategic approach may not optimise the use of infrastructure. However, it is likely from a commercial viability standpoint, that the market will deliver employment land which is well served by appropriate infrastructure. Certain larger developments will also be required to improve infrastructure.		consultation with GMs employers) could be undertaken, and there should be investment in specialist training programmes/facilities linked to schools and universities could be undertaken.
		Provide sufficient employment land in locations that are well-connected and well-served by infrastructure?	o	+ / ?	+ / ?	D	P	GM				The GMSF could undertake a strategic infrastructure assessment to understand capacity and suitability for certain development. This could be made publicly available to help guide development locations.
3	Ensure that there is sufficient coverage and capacity of transport and utilities to support growth and development	Ensure that the transport network can support and enable the anticipated scale and spatial distribution of development?	o	o	? / -	D	P	GM	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	The transport network connectivity which will continue to be planned separately. Over the long term, the network may be more likely to become stressed (in terms of peak hour's capacity) in certain areas due to the piecemeal approach and lack of strategic over-view. The approach will not directly ensure that utilities and digital infrastructure (UDI) can enable to anticipate scale of development. UDI will be indirectly affected as new development comes online and effects on capacity will vary according to scale. This will have to be dealt with on a site-by-site basis. The lack of GM-level strategic approach increases the risk of capacity issue over the long term. Digital infrastructure requirements are unknown at this strategic level	Potential cumulative effects with other development not currently considered by the GMSF. Air quality and noise issues.	Transport infrastructure would continue to be under the remit of TFGM. The GMSF should encourage a strategic approach to transport connectivity.
		Improve transport connectivity?	o	o	? / -	D	P	GM				As above
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development?	o	o	? / -	D	P	GM				The GMSF should set out an infrastructure strategy and policy. The GMSF should consider how to group small-medium size developments to address any capacity issues at the local level.
4	Reduce levels of deprivation and disparity	Reduce the proportion of people living in deprivation?	o	o	o	n/a	n/a	n/a	Receptors: none identified Affected groups: those identified as living in deprivation	Under option 1 there will continue to be development which will bring about job creation in construction, and within the employment land developments. This could potentially affect certain deprivation domains in some areas, e.g. by removing people from unemployment benefits (employment deprivation domain). A portion of developments over a certain size which come forward under Option 1 will include affordable housing. Levels will vary across the districts and	Link to other initiatives or investments (e.g. apprenticeships, health initiatives, education and/or skills programmes)	Direct impact will be through job creation and overall housing stock improvement. However, development near to deprived areas is not a guarantee that there will be a positive impact. As such, policy makers should consider how to ensure economic benefits flow to into the local area. This will only be achieved by developers and the districts/GMCA

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										development types and may not be targeted at deprived areas. It is assumed that there will some increase in supply, which may result in improvements against Barriers to Housing and Services deprivation domain. If new housing results in an improvement in the quality of the overall housing stock, there will be an increase against the Living Environment (indoors subset) deprivation domain.		working together to investigate how local businesses and residents can apply for employment during the construction of developments and, in the case of employment land, in the subsequent end use.
		Support reductions in poverty (including child and fuel poverty), deprivation and disparity across the domains of the Indices of Multiple Deprivation?	o	o	o	I	P					The GMSF should develop policy to ensure a certain proportion of job creation is targeted in deprived areas. This could affect income and employment domains directly. Impacts on IMD "barriers to housing" and "living environment" domains, could be enhanced through development of policy that ensures affordable housing is developed within larger developments. Viability of developments will have to be considered. GMSF could set policy which seeks improvements in housing standards across GM, particularly relating to insulation and efficient heating systems, to help reduce fuel poverty (link to energy efficiency criteria).
5	Promote equality of opportunity and the elimination of discrimination	Foster good relations between different people?	?	?	?	I	P	L	Receptors: none identified Affected groups: various, depending on locality	Relations between different people could be affected where development brings together people or communities which have been previously separate. Specifically, this might be people moving into new areas, where communities are well established (e.g. as an area goes through a programme of regeneration). The details of these interactions cannot be understood in detail at this level, but policy makers should be minded of the potential tensions and opportunities for linking communities and maximising benefits. Under Option 1, provision of facilities and social infrastructure will change as new development comes forward. Discrimination based on protected characteristic is not likely to occur under Option 1.	Potential link to other initiatives which seek to integrate communities	Physically link new communities to existing ones through footpaths, cycle routes and/or roads to help integration. Require new developments to ensure that new facilities are accessible by existing communities, as well as new/future communities.
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?	?	?	?	I	P	Local				Specify that higher density development is more readily accessible to facilities and infrastructure
		Ensure no discrimination based on	n/a	n/a	n/a	n/a	n/a	n/a				The GMSF should recognise the importance of social infrastructure (SI) and other

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		'protected characteristics', as defined in the Equality Act 2010?								Option 1 contains uncertainty around addressing the needs of different areas. With the lack of strategic approach to site allocation, there may be certain areas whose needs are not considered.		community facilities and encourage detailed studies of provision and capacity. The GMSF should state in policy that development which provides new social infrastructure (SI) will be supported, and development which results in loss of SI will not be supported.
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	?	?	?	D	P	GM				Option 1 contains uncertainty around addressing the needs of different areas. With the lack of strategic approach to site allocation, there may be certain areas whose needs are not considered.
6	Support improved health and wellbeing of the population and reduce health inequalities	Support healthier lifestyles and support improvements in determinants of health?	o	o	+	D	P	GM	Receptors: built environment, air quality Affected groups: various	Continued development of housing under Option 1 will result in an increased housing stock which, if delivered to a high standard, has the potential to reduce the number of people living in poor housing (a determinant of health, and likely to affect health inequalities across GM). All other things being equal, this will result in a positive effect over the long term. Access to green space may be promoted in new development.	Improved health and reduced health inequalities through positive planning and the promotion of green spaces	Develop minimum standards to ensure all new housing is of a high quality to avoid persistent problems which can affect health (E.g. damp, draughtiness). Options should be explored for funding mechanisms which seek to channel proceeds from new development, into retrofitting old housing stock. Other determinants of health should be considered (with reference to Department of Health guidance), including the subsets which come under: Global Ecosystem; Natural Environment; Built Environment; Activities; Local Economy; Community; Lifestyle and People. Include in design guide recommendation.
		Reduce health inequalities within GM and with the rest of England?	o	o	+	I	P	GM				as above
		Promote access to green space?	o	o	?	D	P	Local/GM				Policy should be designed to ensure strategic/large development proposals include some green space for use by new and existing

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
												communities. If green space provision is the area is adequate, then new development should ensure links to existing sites are included in design.
7	Ensure access to and provision of appropriate social infrastructure	Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status?	? / -	? / -	? / -	D	P	Local	Receptors: GM population Affected groups: all groups will be affected by this	Under Option 1 it is assumed their new facilities will be delivered alongside development. However, the level of provision is uncertain and there maybe issues with land availability for such facilities considering the scale of residential and employment development which would be delivered in the urban area. This is likely to lead to capacity issues with existing facilities.	Increased access coupled with population growth may present capacity issues	Ensure the existing services can cope with the increased demand or plans are in place to increase capacity or develop new facilities.
		Ensure sufficient access to educational facilities for all children?	? / -	? / -	? / -	D	P	Local				as above
		Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?	? / -	? / -	? / -	D	P	Local				as above
8	Support improved educational attainment and skill levels for all	Improve education levels of children in the area, regardless of their background?	o	o	o / ?	D	P	Local/GM	Receptors: GM population and the GM economy Affected groups: various / all	Option 1 does not directly support education for children, although certain local authority allocations and existing permissions will likely include provision for new schools. There will continue to be development which will bring about job creation in construction, and within the employment land developments. All things being equal, any net increase in employment (construction or operational employment land) will result in a marginal increase in training and up-skilling over the long term as businesses train new staff.	Capacity issues if facilities are not developed at same rate as residential developments	The GMSF should develop policy which supports provision of pre-school, primary and secondary schools, particularly in areas where there is low / under-supply of places. The GMSF should enable development which can contribute to addressing under-performance. The GMSF should resist development which results in loss of educational facilities.
		Improve educational and skill levels of the population of working age?	o	o	+ / ?	I	P	Local/GM				The GMSF should encourage the linking together of new development and training (e.g. requiring apprenticeships for strategic development, larger scale developments and/or those

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
												which have some public funding).
9	Promote sustainable modes of transport	Reduce the need to travel and promote efficient patterns of movement?	o	?	?	D	P	Local / GM	Receptors: GM population, transport network Affected groups: Various	Option 1 will not necessarily promote the public transport network and/or sustainable transport, however the existing public transport infrastructure can and is being augmented to cater for the growing population with strategic and larger developments more likely to influence public transport. New trips will be generated as new development comes forward as part of Option 1. A portion of these trips are likely to involve private motor vehicles, others, depending on their location, will be able to take advantage of existing transport hubs, and others will be less able. Trips will also include freight as part of employment land.	Changes in travel patterns if people begin to take advantage of public transport as their main form of transport	The GMSF should promote strategic approach to sustainable transport in partnership with TFGM. This should focus on planned development, expected demand, the existing network and forthcoming investment in infrastructure (including major transport hubs).
		Promote a safe and sustainable public transport network that reduces reliance on private motor vehicles?	o	?	?	D	P	Local / GM				Develop policy which connects (existing and planned) employment and housing land via genuine sustainable transport options which make private motor vehicle trips unattractive in terms of time-taken and cost. The GMSF should encourage development of a strategic cycle network which safely connects all the districts.
		Support the use of sustainable and active modes of transport?	o	?	?	D	P	Local / GM				As above
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	o	o	o	I	P	Local/GM	Receptors: the atmosphere Affected groups: those affected by poor AQ (see living environment deprivation (outdoor))	A portion of the new trips which will be generated will involve private motor vehicle, the principle source of AQ problems in built up areas.	Increased trips by private motor vehicle will worsen the air quality over time if sustainable modes are not utilised	Continue to address air quality through strategic planning and action plans. Require site specific action for future developments.
11	Conserve and enhance biodiversity, green infrastructure and geodiversity assets	Provide opportunities to enhance new and existing wildlife and geological sites?	?	?	?	D	P	Local/GM	Receptors: wildlife, landscapes and green spaces Affected groups: Various	For option 1 it is assumed all development will be brought forward in line with best practice, the planning system and legislation which covers protection of designated sites/habitats and species. There is potential that non-designated sites (and wildlife corridors) may be affected by development. Such sites can be important at the local scale and can be directly or indirectly important for national/international sites.	Impact on biodiversity assets may occur in conjunction with other developments	The GMSF should promote a strategic approach to ecological sites and networks and consider a GM-wide plan of conservation and enhancement. Opportunities for green space creation should be explored. As should opportunities for linking existing spaces and ecological networks. Access to any new green space

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										Development of sites also presents an opportunity for enhancement, where development sites have little/no ecological value. This option focuses development in the urban area only and therefore will have a limited direct impact on designated sites which are largely located outside of the urban area. The increased density of development in the urban area will put increased pressure on existing green infrastructure and there are likely to be limited significant opportunities to provide new multifunctional green infrastructure.		should be open, thus increasing provision (assuming no green space is taken) in local areas, benefiting existing and future communities.
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	?	?	?	D	P	Local/GM				The GMSF should resist development on designated sites and encourage enhancement of sites. Supporting studies for new development to include appraisal of impact on sites where necessary.
		Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure?	?	?	?	D	P	Local/GM				Policy should stress the value of multifunctional green infrastructure, recognising the economic and social value sites can deliver. Larger, strategic sites should contribute to creation of new multifunctional green infrastructure within the sites themselves, but also attempt to connect to existing sites through green and blue corridors. New sites should be accessible to existing communities as well as proposed future residents.
		Ensure access to green infrastructure providing opportunities for recreation, amenity and tranquillity?	?	?	?	D	P	Local				None identified
12	Ensure communities, developments and infrastructure are resilient to the effects of expected climate change	Ensure that communities, existing and new developments and infrastructure systems are resilient to the predicted effects of climate	o	? / -	? / -	D	P	Local	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	The main climate change risks to GM have been identified in the scoping report as flooding (direct and secondary effects) and urban heat island. Levels of flood risk (accounting for climate change) will be dealt with at each site through risk assessments and design of appropriate best practice mitigation.		Urban heat islands should be identified through up to date research. Urban heat island mitigation should be encouraged in new developments. Including (but not limited to): energy efficient design, building orientation, shading, albedo, fenestration, insulation, green roofs/walls, passive ventilation, and mechanical ventilation. Policy

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		change across GM?								Urban heat island effects will be an issue in existing urban areas, and where large/strategic development has an urbanising effect. Unmitigated, there could be a negative impact in the long term. However, new development also presents opportunities to address existing climate change risk.		should be put in place to retrofit existing heat islands, to reduce risk of heat island impacts. Policy should reinforce best practice methods for accounting for future flood risk from climate change. Risk of extreme flood events which overwhelm areas will persist. This will require emergency planning and provisions to be put in place. The GMSF should support a strategic approach to planning for extreme weather events, which includes emergency services, the Environment Agency, district authorities and other parties.
13	Reduce the risk of flooding to people and property	Restrict the development of property in areas of flood risk?	o	o	o	D	P	Local	Receptors: flood risk areas Affected groups: residents in or near to flood risk areas	Option 1 will not necessarily result in new measures to manage existing/future flood risk (other than those associated with new developments). All development will follow EA guidance/best practice and in consultation with the EA and in line with national policy which restricts development in areas of unacceptable flood risk and prevents increasing risk elsewhere.		Policy should reinforce existing guidance and best practice. Policy should link to other agendas, such as those relating to green infrastructure (and the consideration of multifunctional "green space" and ecosystem services), ecology, recreation and health.
		Ensure adequate measures are in place to manage existing flood risk?	o	o	o	D	P	Local				As above
		Ensure that development does not increase flood risk due to increased run-off rates?	o	o	o	D	P	Local				As above
		Ensure development is appropriately future proof to accommodate future levels of	o	o	o	D	P	Local				As above

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		flood risk including from climate change?										
14	Protect and improve the quality and availability of water resources	Encourage compliance with the Water Framework Directive?	o	o	o	I	P	Wider	Receptors: water courses, ground water, water supplies Affected groups: Various	There is a strong regulatory framework that development must comply with. Measures associated with water quality are therefore assumed to be embedded within any new development. As such, a basic level of compliance is assumed across all new development associated with this option. Overall, no additional effect is anticipated, with the exception of water consumption, which will increase with a net increase in overall housing and employment land.	Both quality and availability of water resources may be impacted by other development	Policy should reinforce existing guidance and best practice in new development, and also seek to bring about improvements in the conurbations surface water network, linking to other agendas (e.g. those set out against objective 13)
		Promote management practices that will protect water features from pollution?	o	o	o	D	P	Wider				As above.
		Avoid consuming greater volumes of water resources than are available to maintain a healthy environment?	o	o	o	D	P	Wider				Policy should encourage design in new developments which encourages sustainable water use. This should include housing and employment. Include in design guide recommendation.
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas emissions	Encourage reduction in energy use and increased energy efficiency?	o	o	o	D	P	GM/wider	Receptors: Climate Affected groups: All	This option sees development continue across GM. This will require resources and energy for development and assuming new development represents an increase in total development (and by association, population), this will see an increase in energy use and carbon emissions. Development of low carbon and renewable energy facilities may occur depending on local policy and/or as part of individual developments.	Landscape quality is reduced, and character is lost from various assets until it is diminished.	Policy should encourage design in new developments which encourages sustainable energy use. This should cover building fabric (e.g. insulation) and technologies. Include in design guide recommendation.
		Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments ?	o	o	?/-	D	P	GM/wider				Policy should encourage the development of low carbon facilities to decouple economic activity with carbon emissions. This should focus on energy generation, transport and buildings. Policy should also ensure integration of low carbon/renewable technology in conventional developments. Include in design guide recommendation.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		Promote a proactive reduction in direct and indirect greenhouse gas emissions emitted across GM?	o	o	?/-	D	P	GM/wider				Policy should include a carbon neutral target.
16	Conserve and/or enhance landscape, townscape, heritage assets and their setting and the character of GM	Improve landscape quality and the character of open spaces and the public realm?	o	o	- / ?	D	P	Local/GM	Receptors: protected landscapes and/or built heritage assets. Protected or locally significant views Affected groups: Non identified	Development will be dispersed around the GM conurbation with various local effects on landscape, townscape and heritage. The type and significance of the effects will depend on the location and nature of the development. Certain development will be subject to specialist assessment (e.g. development of a certain type or scale or in a sensitive environment which will require Environmental Impact Assessment). As such, impact on the most protected site/views/settings should be protected. However, there remains a degree of uncertainty, as cumulative impact of developments (including smaller developments which may not be subject to assessment) may result in impacts on these types of receptors. The increased density of development in the urban area may also have a greater impact on the historic environment.	Landscape quality is reduced, and character is lost from various assets until it is diminished.	Policy should specify protection and enhancement of natural and man-made “assets” (including views, landscapes, historic buildings/structure). Policy should also seek to improve areas where public realm (etc.) requires improvement, recognising the multiple benefits associated with such improvements (recreation/health, social interaction, crime reduction, ecology, heritage etc.).
		Conserve and enhance the historic environment, heritage assets and their setting?	o	o	- / ?	D	P	Local/GM				Heritage Impact Assessment required
		Respect, maintain and strengthen local character and distinctiveness ?	o	o	- / ?	D	P	Local/GM				None identified
17	Ensure that land resources are allocated and used in an efficient and sustainable manner to meet the housing and employment needs of GM, whilst reducing	Support the development of previously developed land and other sustainable locations?	+	+	o / -	D	P	Local / GM	Receptors: greenfield and brownfield land Affected groups: Non identified	The option will include sites which promote redevelopment of derelict land/property although is it is not an explicit feature of the option. The option will promote redevelopment of PDL, but there will inevitably be some development of greenfield sites. The option is purely focused on the urban area and therefore no development is proposed in the Green Belt under this option.	Loss of greenfield land as it is developed incrementally	Explore opportunities for how development of new greenfield sites could contribute to / enable the development of derelict land / sites elsewhere in the conurbation
		Protect the best and most versatile agricultural land / soil resources from	+	+	+	D	P	Local / GM				Draft policy which ensures development of BAMV agricultural land is not promoted

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	land contamination	inappropriate development?										
		Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses?	o	o	?	D	P	Local / GM				Explore opportunities for how development of new greenfield sites could contribute to / enable the development of derelict land / sites elsewhere in the conurbation (e.g. through contributions / hypothecated tax regime etc.)
		Support reductions in land contamination through the remediation and reuse of previously developed land?	o	o	?	I	P	Local / GM				As above.
18	Promote sustainable consumption of resources and support the implementation of the waste hierarchy	Support the sustainable use of physical resources?	o	- / ?	- / ?	D	P	GM / wider	Receptors: waste disposal facilities, finite resources. Affected groups: All those in new development	Option 1 sees development continue. This will increase the use of resources including non-renewables. Development will also continue to produce waste during construction and operation. Municipal waste will increase if housing provision increases (assuming this represents an increase in population). Construction and demolition waste from increased building activity will also result and will likely be the most significant factor that affects waste disposal.	Waste generation with other (non-OA) schemes. Intra-development effects with other Allocations, urban densification projects.	Set design principles based on realistic expectations for new development. Require new developments of a certain size to meet design principles in terms of resources use (including recycled materials). This should relate to construction and operation
		Promote movement up the waste hierarchy?	o	- / ?	- / ?	D	P	GM / wider				As above
		Promote reduced waste generation rates?	o	- / ?	- / ?	D	P	GM / wider				As above

2019 Spatial Option 2 – Urban Max

Ref	Objective	Assessment criteria….will the GMSF	Assessment ST (0-4 years)	Assessment MT (5-9 years)	Assessment LT (10+ years)	Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
1	Provide a sustainable supply of housing land including for an appropriate mix of sizes, types, tenures in locations to meet housing need, and to support economic growth	Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and affordable housing?	+	++	++	D	P	Local / GM	Receptors: housing market, local / GM population where sites come forward Affected groups: Housing with an undersupply of green infrastructure is more likely to affect those already living in deprivation and with disabilities	This option focuses all development in the existing urban area, significantly increasing densities in the city centre, principle town centres and other town centres. The concentration of most employment and housing development in the existing urban area is likely to reduce the need to travel, with increases in the amount of co-located employment and housing sites. The option will require high density apartment development in order for the LHN figure to be achieved. The option is therefore unlikely to deliver an appropriate mix of housing types and tenures to meet the need. Considering the limited space in the urban area the option would lead to an increased housing development pressure on greenspaces in the urban area, as well as existing employment sites. There is uncertainty about affordable housing as this will be dealt with through individual district Local Plans, with a local policy based on each district's need. The spatial location of housing is unlikely to have significant impacts on energy efficiency and resilience of housing stock.	Potential effects with other local development schemes which have not been captured by the GMSF (e.g. smaller schemes which come forward over the plan period).	The LHN will be achieved with this option.
		Ensure an appropriate mix of types, tenures and sizes of properties in relation to the respective levels of local demand?	-	-	-	D	P	Local/GM				A strategic evidenced-based approach to stimulate investment in under-supplied housing types and tenures. The uncertainty around affordable housing will need to be addressed in district Local Plans.
		Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate?	+ / ?	+ / ?	+ / ?	D	P	Local / GM				A strategic approach will be required to link up sites to employment centres and green spaces. GMSF policy would be required to protect existing greenspaces from development, which are likely to come under significant development pressure in this option.
		Support improvements in the energy efficiency and resilience of the housing stock?	o	o / +	o / +	D	P	Wider				GMSF should ensure coverage of this objective in policy. Such policy might require Energy Assessments for new developments of a certain size.
2	Provide a sustainable supply of employment land to ensure	Meet current and future demand for employment land across GM?	-	--	--	D	P	Local / GM	Receptors: GM population and GM economy Affected groups: widespread effects	This option constrains employment development to the urban area only, this is unlikely to provide the range of sites needed to meet the employment need. For example, logistics related	Could have cumulative effects with other local development schemes	Brownfield land remediation grant scheme would be required to ensure a sustainable supply of employment land.

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	sustainable economic growth and job creation	Support education and training to provide a suitable labour force for future growth?	o	o	o	I	P	GM		development needs accessible locations, close to the strategic road network. Without a suitable range of sites GM could lose strategic employment uses to other areas. Under this option there is likely to be a pressure to develop employment land for residential. This is likely to most acute towards the end of the plan period when the supply of housing land is likely to be most constrained.		GMSF should link to wider GMCA skills programmes. Strategic mapping of existing and future employment requirements (in consultation with GMs employers) could be undertaken, and there could be investment in specialists training programmes/facilities linked to schools and universities.
		Provide sufficient employment land in locations that are well-connected and well-served by infrastructure?	- / +	- / +	- / +	D	P	Local / GM				GMSF policies should require delivery of the necessary transport infrastructure.
3	Ensure that there is sufficient coverage and capacity of transport and utilities to support growth and development	Ensure that the transport network can support and enable the anticipated scale and spatial distribution of development?	+	+	+ / ?	D	P	GM	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	Concentrating development in the existing urban area will link well to the existing transport network and should lead to a greater use of public transport. There is a risk that in the long term the infrastructure network will become increasingly stressed as a result of the concentration of the population in the urban area. Careful planning of the network will therefore be required. New housing and businesses would be situated close to existing utility and digital infrastructure. There is a need to ensure that it can accommodate the demands of the scale of new development planned through the GMSF.	Potential cumulative effects with other development not currently considered by the GMSF. Air quality and noise issues.	The GMSF should encourage a strategic approach to transport connectivity. Policies need to require the necessary transport infrastructure to be delivered in discussion with TFGM. The GMSF should define "most accessible locations" to ensure it is clear where these are in order to secure higher densities. Ensure long term investment in the transport network and promote through policy sustainable transport options.
		Improve transport connectivity?	+	+	+ / ?	D	P	GM				As above
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and	?	?	?	D	P	GM				Ensure infrastructure partners are consulted on development proposals

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		spatial distribution of development ?										
4	Reduce levels of deprivation and disparity	Reduce the proportion of people living in deprivation?	o	+ / -	+ / -	I	P	Local / GM	Receptors: none identified Affected groups: those identified as living in deprivation	Under this option there will be development which will bring about job creation in construction, and within the employment land developments. Concentrating development in the urban areas will also include a number of areas of high deprivation. This could potentially affect certain deprivation domains in certain areas, by removing people from unemployment benefits (employment deprivation domain). It is assumed that there will some increase in supply of affordable housing which will result in improvements against barriers to Housing and Services deprivation domain. There will be an increase against the Living Environment (indoors subset) deprivation domain as the new housing will result in an improvement to the quality of the housing stock.	Link to other initiatives or investments (e.g. apprenticeships)	Direct impact will be through: job creation and overall housing stock improvement. However, development near to deprived areas is not a guarantee that there will be a positive impact. As such, policy makers should consider how to ensure economic benefits flow to into the local area. This will only be achieved by developers and the districts/GMCA working together to investigate how local businesses and residents can apply for employment during the construction of developments and, in the case of employment land, in the subsequent end use. The GMSF should develop policy to ensure a certain proportion of job creation is targeted in deprived areas. This could affect income and employment domains directly. GMSF could set policy which seeks improvements in housing standards across GM, particularly relating to insulation and efficient heating systems, to help reduce fuel poverty (link to energy efficiency criteria).
		Support reductions in poverty (including child and fuel poverty), deprivation and disparity across the domains of the Indices of	o	o	o	I	P	Local / GM				As above.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		Multiple Deprivation?										
5	Promote equality of opportunity and the elimination of discrimination	Foster good relations between different people?	?	?	?	I	P	Local	Receptors: none identified Affected groups: various, depending on locality	Delivering higher density development in the urban area may affect relations between different people where development brings together people or communities which have been previously separate. Specifically, this might be people moving into new areas, where communities are well established (e.g. as an area goes through a programme of regeneration). The details of these interactions cannot be understood in detail at this level, but policy makers should be minded of the potential tensions and opportunities for linking communities and maximising benefits. Under Option 2, provision of facilities and social infrastructure will change as new development comes forward. Intensifying development in the urban area may make facilities more accessible to a greater number of people. Discrimination based on protected characteristic is not likely to occur under Option 2.	Potential link to other initiatives which seek to integrate communities	Physically link new communities to existing ones through footpaths, cycle routes and/or roads to help integration. Require new development to ensure that new facilities are accessible by existing communities as well as new/future communities.
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?	+	+	+	D	P	Local				The GMSF should recognise the importance of social infrastructure (SI) and other community facilities and encourage detailed studies of provision and capacity. The GMSF should state in policy that development which provides new social infrastructure (SI) will be supported, and development which results in loss of SI will not be supported.
		Ensure no discrimination based on ‘protected characteristics’, as defined in the Equality Act 2010?	o	o	o	I	P	Local				No direct discrimination has been identified. However, accessibility should be considered when new SI is delivered (e.g. for disabled and elderly people).
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	?	?	?	D	P	GM				Consider SI needs at specific locations as sites come forward.
6	Support improved health and	Support healthier lifestyles and	+	+	+	I	P	GM	Receptors: built environment, air quality	Development of housing under Option 2 will result in an increased housing stock which, if	Improved health and reduced health inequalities through	Develop minimum standards to ensure all new housing is of a high quality to avoid

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	wellbeing of the population and reduce health inequalities	support improvements in determinants of health?							Affected groups: various	delivered to a high standard, has the potential to reduce the number of people living in poor housing (a determinant of health, and likely to affect health inequalities across GM). All other things being equal, this will result in a positive effect over the long term. Under this option green spaces within the urban area will be required to support a much greater population and it is likely to be difficult to deliver significant new green spaces in the urban area. There may also be development pressure on green spaces, particularly in the long term when development sites will become scarcer.	positive planning and the promotion of green spaces.	persistent problems which can affect health (E.g. damp, draughtiness). Options should be explored for funding mechanisms which seek to channel proceeds from new development, into retrofitting old housing stock.
		Reduce health inequalities within GM and with the rest of England?	o	+	+	I	P	GM				As above.
		Promote access to green space?	o	--	--	D	P	GM				Policy should be designed to ensure development proposals include some green space for use by new and existing communities. If green space in the area is adequate, then new development should ensure links to existing sites are included in design.
7	Ensure access to and provision of appropriate social infrastructure	Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status?	o	? / -	? / -	D	P	Local	Receptors: GM population Affected groups: all groups will be affected by this	Under Option 2 it is assumed that new facilities will be delivered alongside development. However, the level of provision is uncertain and there maybe issues with land availability for such facilities considering the scale of residential and employment development which would be delivered in the urban area. This is likely to lead to capacity issues with existing facilities.	The increased number of residents in areas will put pressure on the existing facilities and social infrastructure and may reduce the quality of services unless more are provided.	Ensure the existing services can cope with the increased demand or plans are in place to increase capacity or develop new facilities.
		Ensure sufficient access to educational facilities for all children?	o	? / -	? / -	D	P	Local				As above
		Promote access to and provision of appropriate community social infrastructure including playgrounds	o	? / -	? / -	D	P	Local				Ensure playgrounds etc are a policy requirement and located in accessible locations.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		and sports facilities?										
8	Support improved educational attainment and skill levels for all	Improve education levels of children in the area, regardless of their background?	o	? / +	? / +	I	P	Local / GM	Receptors: GM population and the GM economy Affected groups: various / all	Option 2 does not directly support education for children, although development will likely include provision for new schools. There will continue to be development which will bring about job creation in construction, and within the employment land developments. All things being equal, any net increase in employment (construction or operational employment land) will result in a marginal increase in training and up-skilling over the long term as businesses train new staff.	Improved skill levels of the workforce	The population of GM is projected to grow and as such existing educational facilities will see an increase in demand. The GMSF should develop policy which supports the provision or pre-school, primary and secondary schools particularly in areas where there is low / under – supply of places.
		Improve educational and skill levels of the population of working age?	o	?/+	?/+	I	P	Local / GM				The GMSF should encourage the linking together of new development and training (e.g. requiring apprenticeships for strategic development, larger scale developments and/or those which have some public funding). Development linked to major infrastructure investment should seek to up-skill the local workforce to ensure the right mix of skills is available into the future.
9	Promote sustainable modes of transport	Reduce the need to travel and promote efficient patterns of movement?	+	+	+	D	P	Local / GM	Receptors: GM population, transport network Affected groups: Various	Option 2 will not necessarily promote the public transport network and/or sustainable transport; however, the existing public transport infrastructure can be augmented to cater for the growing population with strategic and larger developments more likely to influence public transport. This option is the most tightly focused option and therefore offers more opportunities for cycling and walking. New trips will be generated as new development comes forward as part of Option 2. Focusing development in the urban area should allow new developments to take advantage of existing transport hubs. Trips will also	Changes in travel patterns as people begin to take advantage of public transport as their main form of transport	The GMSF should promote a strategic approach to sustainable transport. This should focus on planned development, expected demand, the existing network and forthcoming investment in infrastructure (including major transport hubs).
		Promote a safe and sustainable public transport network that reduces reliance on private motor vehicles?	o	+	+	D	P	Local / GM				Develop policy which connects (existing and planned) employment and housing land via genuine sustainable transport options which make private motor vehicle trips unattractive in terms of time-taken and cost. The GMSF should encourage development of a strategic cycle network which safely connects all the districts.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										include freight as part of employment land.		
		Support the use of sustainable and active modes of transport?	+	+	+	D	P	Local / GM				As above.
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	?	?	? / +	D	P	Local / GM	Receptors: the atmosphere Affected groups: those affected by poor AQ (see living environment deprivation (outdoor))	The densification of development in the urban area should reduce the need to travel and therefore may lead to decrease in the number of trips taken by private car. It may also make car parking more expensive. There could therefore be a shift towards more sustainable travel options and as a result an improvement in air quality.	Increased trips by private motor vehicle will worsen the air quality over time if sustainable modes are not utilised	Continue to address air quality through strategic planning and action plans. Require site specific action for future development.
11	Conserve and enhance biodiversity, green infrastructure and geodiversity assets	Provide opportunities to enhance new and existing wildlife and geological sites?	o	o	-/?	D	P	Local / GM	Receptors: wildlife, landscapes and green spaces Affected groups: Various	It is assumed all development will be brought forward in line with best practice, the planning system and legislation which covers protection of designated sites/habitats and species. There is potential that non-designated sites (and wildlife corridors) may be affected by development. Such sites can be important at the local scale and can be directly or indirectly important for national/international sites. Development of sites also presents an opportunity for enhancement, where development sites have little/no ecological value. This option focuses development in the urban area only and therefore will have a limited direct impact on designated sites which are largely located outside of the urban area. The increased density of development in the urban area will put increased pressure on existing green infrastructure and there are likely to be limited significant opportunities to provide	Wildlife, geological and other sites that have a landscape value or value to different habitats deteriorate if they are not enhanced and looked after, whereas if they are, they are able to thrive and become central to communities.	The GMSF should promote a strategic approach to ecological sites and networks and consider a GM-wide plan of conservation and enhancement. Opportunities for green space creation should be explored. As should opportunities for linking existing spaces and ecological networks. Access to any new green space should be open, thus increasing provision (assuming no green space is taken) in local areas, benefiting existing and future communities. A Net gain policy could also enhance existing sites.
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	o	o	o	D	P	Local / GM				The GMSF should resist harm to designated sites and encourage enhancement of sites. Supporting studies for new development to include appraisal of impact on sites where necessary.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure?	?	?	? / -	D	P	Local / GM		new multifunctional green infrastructure.		Policy should stress the value of multifunctional green infrastructure, recognising the economic and social value sites can deliver. Larger, strategic sites should contribute to creation of new multifunctional green infrastructure within the sites themselves, but also attempt to connect to existing sites through green and blue corridors. New sites should be accessible to existing communities as well as proposed future residents.
		Ensure access to green infrastructure providing opportunities for recreation, amenity and tranquillity?	?	?	? / -	D	P	Local				As above.
12	Ensure communities, developments and infrastructure are resilient to the effects of expected climate change	Ensure that communities, existing and new developments and infrastructure systems are resilient to the predicted effects of climate change across GM?	?	? / -	? / -	D / I	P	Local	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	The main climate change risks to GM have been identified in the scoping report as flooding (direct and secondary effects) and urban heat island. Levels of flood risk (accounting for climate change) will be dealt with at each site through risk assessments and design of appropriate best practice mitigation. Urban heat island effects will be an issue in existing urban areas, and where large/strategic development has an urbanising effect. Unmitigated, there could be a negative impact in the long term. However, new development also presents opportunities to address existing climate change risk.	Developments are not protected against climate change impacts and the effects are felt within new developments. Some of the potential and cumulative effects may not be predicted and will therefore cause more of an impact.	Urban heat islands should be identified through up to date research. Urban heat island mitigation should be encouraged in new developments. Including (but not limited to): energy efficient design, building orientation, shading, albedo, fenestration, insulation, green roofs/walls, passive ventilation, and mechanical ventilation. Policy should be put in place to retrofit existing heat islands, to reduce risk of heat island impacts. Policy should reinforce best practice methods for accounting for future flood risk from climate change. Risk of extreme flood events which overwhelm areas will persist. This will require emergency planning and provisions to be

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
												put in place. The GMSF should support a strategic approach to planning for extreme weather events, which includes emergency services, the Environment Agency, district authorities and other parties.
13	Reduce the risk of flooding to people and property	Restrict the development of property in areas of flood risk?	?	? / -	? / -	D	P	Local	Receptors: flood risk areas Affected groups: residents in or near to flood risk areas	This option will not necessarily result in new measures to manage existing/future flood risk (other than those associated with new developments). All development will follow EA guidance/best practice and in consultation with the EA and in line with national policy which restricts development in areas of unacceptable flood risk and prevents increasing risk elsewhere. Considering the scarcity of land in the urban area there may be more pressure to build on sites which are at risk of flooding. There is the possibility that where a brownfield site is redeveloped, and drainage standards are applied that this could lead to a reduction in surface water run off compared to the present situation. However, this relies on districts or GM having appropriate drainage standards. The GM SFRA has mapped flood extents taking into account climate change which will help to ensure development is appropriately future proofed.	Increased risk of flooding	Policy should reinforce existing guidance and best practice. Policy should link to other agendas, such as those relating to green infrastructure (and the consideration of multifunctional "green space" and ecosystem services), ecology, recreation and health.
		Ensure adequate measures are in place to manage existing flood risk?	o	o	o	D	P	Local				As above
		Ensure that development does not increase flood risk due to increased run-off rates?	o	o	+	D	P	Local				Policies should include appropriate drainage standards.
		Ensure development is appropriately future proof to accommodate future levels of flood risk including from climate change?	o	o	+	D	P	Local				As above. In addition, the GM SFRA includes climate change which will help to consider the likely increase in flood risk.
14	Protect and improve the quality and availability of water resources	Encourage compliance with the Water Framework Directive?	o	o	o	I	P	Wider	Receptors: water courses, ground water, water supplies Affected groups: Various	There is a strong regulatory framework that development must comply with. Measures associated with water quality are therefore assumed to be embedded within any new development. As such, a basic	The quality and availability of water resources may be impacted by other development	Policy should reinforce existing guidance and best practice in new development, and also seek to bring about improvements in the conurbations surface water network, linking to other

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										level of compliance is assumed across all new development associated with this option. Overall, no additional effect is anticipated, with the exception of water consumption, which will increase with a net increase in overall housing and employment land.		agendas (e.g. those set out against objective 13)
		Promote management practices that will protect water features from pollution?	o	o	o	D	P	Local				As above.
		Avoid consuming greater volumes of water resources than are available to maintain a healthy environment ?	o	o	o	D	P	Wider				Policy should encourage design in new developments which encourages sustainable water use. This should include housing and employment. Continue to liaise with United Utilities as GMSF progresses.
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas emissions	Encourage reduction in energy use and increased energy efficiency?	+	+	+	D	P	GM / wider	Receptors: Climate Affected groups: All	This option sees development continue across GM. This will require resources and energy for development and assuming new development represents an increase in total development (and by association, population), this will see an increase in energy use and carbon emissions. Development of low carbon and renewable energy facilities may occur depending on local policy and/or as part of individual developments. Under this option the population and economic activity in GM will increase from the baseline which will have an impact on demand for energy. This option encourages use of public transport and reduces the need to travel by locating homes and businesses close to each other, which in turn reduces the need to travel and use energy.	Increased greenhouse gas emissions and reliance on non-renewable energy sources	Policy should encourage design in new developments which encourages sustainable energy use. This should cover building fabric (e.g. insulation) and technologies. Include in design guide recommendation.
		Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments?	o	o	o	D	P	GM / wider				Policy should encourage the development of low carbon facilities to decouple economic activity with carbon emissions. This should focus on energy generation, transport and buildings. Policy should also ensure integration of low carbon/renewable technology in conventional developments.
		Promote a proactive reduction in direct and indirect greenhouse gas emissions	+	+	+	D	P	GM / wider				Policy should include a carbon neutral target.

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		emitted across GM?										
16	Conserve and/or enhance landscape, townscape, heritage assets and their setting and the character of GM	Improve landscape quality and the character of open spaces and the public realm?	?	?	?	D	P	Local / GM	Receptors: protected landscapes and/or built heritage assets. Protected or locally significant views Affected groups: Non identified	Development will be dispersed around the GM conurbation with various local effects on landscape, townscape and heritage. The type and significance of the effects will depend on the location and nature of the development. Certain development will be subject to specialist assessment (e.g. development of a certain type or scale or in a sensitive environment which will require Environmental Impact Assessment) and Heritage Impact Assessments will be necessary where development could have an impact on a heritage asset. As such, impact on the most protected site/views/settings should be protected and enhanced. However, there remains a degree of uncertainty, as cumulative impact of developments may result in impacts on these types of receptors. The increased density of development in the urban area may also have a greater impact on the historic environment.	Landscape quality is reduced, and character is lost from various assets until it is diminished.	Policy should specify protection and enhancement of natural and man-made “assets” (including views, landscapes, historic buildings/structure). Policy should also seek to improve areas where public realm (etc.) requires improvement, recognising the multiple benefits associated with such improvements (recreation/health, social interaction, crime reduction, ecology, heritage etc.).
		Conserve and enhance the historic environment, heritage assets and their setting?	?	?	? / -	D	P	Local / GM				Heritage Impact Assessment required to identify any impacts from sites, to conserve and enhance heritage assets and their setting.
		Respect, maintain and strengthen local character and distinctiveness?	?	?	? / -	D	P	Local / GM				Local policies should set out design expectations and codes.
17	Ensure that land resources are allocated and used in an efficient and sustainable manner to meet the housing and employment needs of GM, whilst reducing land contamination	Support the development of previously developed land and other sustainable locations?	++	++	++	D	P	Local / GM	Receptors: greenfield and brownfield land Affected groups: Non identified	The option will include sites which promote redevelopment of derelict land/property although is it is not an explicit feature of the option. The option will promote redevelopment of PDL and higher densities, but there will inevitably be some development of greenfield sites. Option 2 is purely focused on the urban area and therefore no development is proposed in the Green Belt under this option.	Loss of greenfield land.	Explore opportunities for how development of new greenfield sites could contribute to / enable the development of derelict land / sites elsewhere in the conurbation
		Protect the best and most versatile (BAMV) agricultural land / soil resources from inappropriate	+	+	+	D	P	Local / GM				Draft policy which ensures development of BAMV agricultural land is not promoted

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		development?										
		Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses?	++	++	++	D	P	Local / GM				Explore opportunities for how development of new greenfield sites could contribute to / enable the development of derelict land / sites elsewhere in the conurbation (e.g. through contributions / hypothecated tax regime etc.)
		Support reductions in land contamination through the remediation and reuse of previously developed land?	+	+	+	D	P	Local / GM				As above.
18	Promote sustainable consumption of resources and support the implementation of the waste hierarchy	Support the sustainable use of physical resources?	o	- / ?	- / ?	D	P	GM / wider	Receptors: waste disposal facilities, finite resources. Affected groups: All those in new development	This option sees development continue. This will increase the use of resources including non-renewables. Development will also continue to produce waste during construction and operation. Municipal waste will increase if housing provision increases (assuming this represents an increase in population). Construction and demolition waste from increased building activity will also result and will likely be the most significant factor that affects waste disposal.	Waste generation with other (non-OA) schemes. Intra-development effects with other Allocations, urban densification projects.	Set design principles based on realistic expectations for new development. Require new developments of a certain size to meet design principles in terms of resources use (including recycled materials). This should relate to construction and operation
		Promote movement up the waste hierarchy?	o	- / ?	- / ?	D	P	GM / wider				As above.
		Promote reduced waste generation rates?	o	- / ?	- / ?	D	P	GM / wider				As above.

2019 Spatial Option 6 – Hybrid Growth

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
1	Provide a sustainable supply of housing land including for an appropriate mix of sizes, types, tenures in locations to meet housing need, and to support economic growth	Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and affordable housing?	+	++	++	D	P	Local / GM	Receptors: housing market, local / GM population where sites come forward. Affected groups: Housing with an undersupply of green infrastructure is more likely to affect those already living in deprivation and with disabilities	This Option is designed to meet the LHN across GM and has the potential to deliver a mix of types, tenures and sizes of dwellings since it includes a range of locations for development. It is likely that new housing will be located close to and/or have existing transport links to existing employment opportunities, town centres and green spaces in around the urban area. However, as this option includes employment sites adjacent to the motorway network, which some employment sector such as logistics and advanced manufacturing prefer, residents may need to travel further for some employment opportunities. However, the provision of new public transport should address this. The spatial location of housing is unlikely to have significant impacts on energy efficient and resilience of housing stock, although the GMSF should seek to improve energy efficient in all housing.	Could have cumulative socio-economic and environmental effects with other local development schemes.	None as this option would meet LHN.
		Ensure an appropriate mix of types, tenures and sizes of properties in relation to the respective levels of local demand?	+	++	++	D	P	Local / GM				Require a policy on the mix of types, tenures and sizes of housing.
		Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate?	+/-	+/-	+/-	D	P	Local / GM				To ensure land is well connected Policies must ensure allocations are accessible by public transport
		Support improvements in the energy efficiency and resilience of the housing stock?	o	o/+	o/+	D	P	Local / GM				GMSF should ensure coverage of this objective in policy. Such policy might require Energy Assessments for new developments of a certain size.
2	Provide a sustainable supply of employment land to ensure	Meet current and future demand for employment land across GM?	+	++	++	D	P	Local / GM	Receptors: GM population and GM economy Affected groups: widespread effects	This option will meet current and future demand for employment land by proposing a range of locations to meet the needs of different business sectors.	Could have cumulative socio-economic and environmental effects with other local development schemes.	None required as need will be met.

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	sustainable economic growth and job creation	Support education and training to provide a suitable labour force for future growth?	o	o	o	n/a	n/a	n/a		The spatial location of development in this option is unlikely to have an impact of the provision of education and training of workforce. This Option would deliver employment opportunities in a range of locations to meet needs. Employment land in the urban area, close to town centres and sustainable transport hubs could be served well by existing transport infrastructure. Employment land further afield adjacent to motorway junctions would need to ensure that it is accessible to workers, including by public transport.		The GMSF should link to other CA plans and programmes about improving skills and training for GM residents.
		Provide sufficient employment land in locations that are well-connected and well-served by infrastructure ?	+/?	?/++	?/++	D	P	Local / GM				The GMSF should encourage a strategic approach to transport connectivity and ensure that employment locations take account of current and future infrastructure. GMSF policies should require delivery of the necessary transport infrastructure.
3	Ensure that there is sufficient coverage and capacity of transport and utilities to support growth and development	Ensure that the transport network can support and enable the anticipated scale and spatial distribution of development ?	+	+	+	D	P	Local / GM	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	Under this Option new housing and businesses would be situated close to transport connections, in and adjacent to the urban areas and in further afield where they boost northern competitiveness and capitalise on national and global assets. The GMSF would need to ensure that development allocations beyond the urban area are supported by a sustainable transport network, but it also presents the opportunity to create new transport infrastructure. New housing and businesses would be situated close to existing utility and digital infrastructure. There is a need to ensure that it can accommodate the demands of the scale of new development planned through the GMSF.	Could have cumulative socio-economic and environmental effects with other local development schemes. Air quality and noise issues	Ensure long term investment in the transport network and promote through policy sustainable transport options. Policies need to require the necessary transport infrastructure to be delivered in discussion with TFGM.
		Improve transport connectivity?	+	+	+	D	P	Local / GM				Ensure long term investment in the transport network and promote through policy sustainable transport options.
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development ?	?	?	?	D	P	Local / GM				Ensure long term investment in the utility and digital network by working with providers.
4	Reduce levels of deprivation and disparity	Reduce the proportion of people living in deprivation?	o	+	+	D	P	Local / GM	Receptors: GM population Affected groups: those	This Option would tackle deprivation in variety of locations in GM by providing new homes and jobs in the urban area, town centres, close to sustainable	Link to other initiatives or investments (e.g. apprenticeships, health initiatives, education and/or skills programmes)	None identified as this option is designed to reduce deprivation.

Ref	Objective	Assessment criteria….will the GMSF	Assessment ST (0-4 years)	Assessment MT (5-9 years)	Assessment LT (10+ years)	Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
		Support reductions in poverty (including child and fuel poverty), deprivation and disparity across the domains of the Indices of Multiple Deprivation?	o	+	+	D	P	Local / GM	identified as living in deprivation	transport hubs, deprived areas across GM and specifically tackle deprivation in the north of GM. It is assumed that there will some increase in supply of affordable housing which will result in improvements against barriers to Housing and Services deprivation domain. There will be an increase against the Living Environment (indoors subset) deprivation domain as the new housing will result in an improvement to the quality of the housing stock.		As above.
5	Promote equality of opportunity and the elimination of discrimination	Foster good relations between different people?	?	?	?	?	?	?	Receptors: none identified Affected groups: various, depending on locality	This spatial option is unlikely to have a significant impact on or the impacts are unknown on this objective. However, the emphasis on building around sustainable transport locations under is option is likely to have a positive impact connecting people with facilities and infrastructure.	Potential link to other initiatives which seek to integrate communities.	Physically link new communities to existing ones through footpaths, cycle routes and/or roads to help integration. Require new development to ensure that new facilities are accessible by existing communities as well as new/future communities.
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?	+	+	+	D	P	Local / GM				The GMSF should recognise the importance of social infrastructure (SI) and other community facilities and encourage detailed studies of provision and capacity. The GMSF should state in policy that development which provides new social infrastructure (SI) will be supported, and development which results in loss of SI will not be supported.
		Ensure no discrimination based on 'protected characteristics', as defined in the Equality Act 2010?	o	o	o	?	?	?				No direct discrimination has been identified. However, accessibility should be considered when new SI is delivered (e.g. for disabled and elderly people).

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	?	?	?	?	?	?				Physically link new communities to existing ones through footpaths, cycle routes and/or roads to help integration. Require new development to ensure that new facilities are accessible by existing communities as well as new/future communities.
6	Support improved health and wellbeing of the population and reduce health inequalities	Support healthier lifestyles and support improvements in determinants of health?	o	+	+	D	P	Local / GM	Receptors: built environment, air quality Affected groups: various	Under this Option health facilities would be located in the most sustainable locations within the urban area and new allocations in Green belt would provide opportunities to create new health facilities and new development that promoted heathy lifestyles e.g. green infrastructure and cycling routes. An increase in housing under this option has the potential to reduce the number of people living in poor housing conditions which can have a positive impact on health. Under this option existing greenspaces in the urban area could be capitalised on, new greenspaces created in developments in Green Belt and sustainable transport links created to connect greenspaces further afield.	Improved health and reduced health inequalities through positive planning and the promotion of green spaces.	The GMSF should be designed to ensure strategic/large development proposals include some greenspace for use by new and existing communities.
		Reduce health inequalities within GM and with the rest of England?	o	?/+	?/+	I	P	Local / GM				As above.
		Promote access to green space?	o	?/+	?/+	D	P	Local / GM				Policy should be designed to ensure development proposals include some green space for use by new and existing communities. If green space in the area is adequate, then new development should ensure links to existing sites are included in design
7	Ensure access to and provision of appropriate social infrastructure	Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status?	o	+ / ?	+ / ?	D	P	Local / GM	Receptors: GM population Affected groups: all groups will be affected by this	Local authorities will receive contributions from development of sites which my help to increase investment in education and other social infrastructure. Under this option, which seeks to redistribute development around GM, there might be positive effects in areas which have not experienced much investment or development, including the provision of social infrastructure.	Increased access coupled with population growth may present capacity issues.	Ensure existing facilities can cope with demand with the increased demand or plans are in place to increase capacity or develop new facilities in new locations.
		Ensure sufficient access to educational	o	+/?	+/?	D	P	Local / GM				As above.

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		facilities for all children?								There is a potential risk, that over time, existing facilities could be put under pressure from the level of demand in the urban area, but there might be opportunities to create new facilities in the Green Belt under this option.		
		Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?	o	+ / ?	+ / ?	D	P	Local / GM				As above.
8	Support improved educational attainment and skill levels for all	Improve education levels of children in the area, regardless of their background?	o	+ / ?	+ / ?	I	P	Local / GM	Receptors: GM population and the GM economy Affected groups: various / all	Local authorities will receive contributions from development of sites which my help to increase investment in education and training. Under this option, which seeks to redistribute development around GM, there might be positive effects in areas which have not experienced much investment or development, including the provision of education. There is a potential risk, that over time, existing facilities could be put under pressure from the level of demand in the urban area, but there might be opportunities to create new facilities in the Green Belt under this option.	Potential capacity issues if facilities are not developed at same rate as residential developments.	Ensure existing facilities can cope with demand with the increased demand or plans are in place to increase capacity or develop new facilities in new locations.
		Improve educational and skill levels of the population of working age?	o	+ / ?	+ / ?	I	P	Local / GM				The GMSF should encourage the linking together of new development and training (e.g. requiring apprenticeships for strategic development, larger scale developments and/or those which have some public funding). Development linked to major infrastructure investment should seek to up-skill the local workforce to ensure the right mix of skills is available into the future.
9	Promote sustainable modes of transport	Reduce the need to travel and promote efficient patterns of movement?	++	++	+/?	D	P	Local / GM	Receptors: GM population, transport network Affected groups: Various	This option includes taking advantage of the most sustainable locations in GM. There is a need to ensure that new allocations in Green Belt accessible by public transport and designed to promote active and healthy lifestyles. In the long term there is a need to ensure that sustainable transport provision can keep pace with the level of demand. This option	Changes in travel patterns as people begin to take advantage of public transport as their main form of transport	Ensure that in the long-term sustainable transport provision can keep pace with the level of demand and that larger new developments on the edge of the urban area are designed to be well connected.
		Promote a safe and sustainable public transport network that	++	++	+/?	D	P	Local / GM				As above.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		reduces reliance on private motor vehicles?								includes large allocations in the north and south GM which are likely to stimulate more trips, some of which will include private car trips. Those in / close to urban sites will also stimulate car trips, but in lower proportions, as they are more likely to be located to employment land or a transport hub. The allocations are large enough that development would require investment in new public transport provision. This presents the opportunity to promote efficient patterns of movement through the provision of viable public transport, cycle and walking routes in a way which would not be possible with smaller developments. Although, there is no guarantee that public transport will be used over private vehicle. The availability of potential large sites in the Green Belt could allow the co-location of employment and housing		
		Support the use of sustainable and active modes of transport?	++	++	+/?	D	P	Local / GM				As above.
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	o	?/-	?/-	D	P	Local / GM	Receptors: the atmosphere Affected groups: those affected by poor AQ (see living environment deprivation (outdoor))	This option seeks to reduce the need to travel and to maximise sustainable patterns of transport as alternatives to using vehicles. Less use of petrol and diesel vehicles will improve air quality. It is likely to be a gradual change as people learn to adapt to new ways of travelling. However, it also includes Green belt release on the edge of the urban area which if not designed to promote the use of sustainable transport, could increase car journeys.	Increased trips by private motor vehicle will worsen the air quality over time if sustainable modes are not utilised.	Particular attention would have to be paid to the strategic provision of public transport infrastructure for the allocations to reduce reliance on the private car.
11	Conserve and enhance biodiversity, green infrastructure and geodiversity assets	Provide opportunities to enhance new and existing wildlife and geological sites?	+/?	+/?	+/?	D	P	Local	Receptors: wildlife, landscapes and green spaces Affected groups: Various	It is assumed all development will be brought forward in line with best practice, the requirements of the planning system and legislation that covers the protection of designated sites/habitats and species. There is potential that non-designated sites and wildlife	Wildlife, geological and other sites that have a landscape value or value to different habitats deteriorate if they are not enhanced and managed.	The GMSF should promote strategic approach to ecological sites and networks and consider a GM-wide plan of conservation and enhancement. Opportunities for green space creation should be explored. As should opportunities for linking existing spaces and ecological networks. Access

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										corridors may be affected by development. Larger sites on the edge of the urban area on greenfield land might pose more of a potential risk to biodiversity than sites in the urban area. However, they would also have the potential to create new sites of ecological interest and the development of multi-functional sites co-located next to housing.		to any new green space should be open, thus increasing provision in local areas, benefiting existing and future communities.
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	+/?	+/?	+/?	D	P	Local				The GMSF should resist development on designated sites and encourage enhancement of sites. Supporting studies for new development to include appraisal of impact on sites where necessary.
		Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure?	+/?	+/?	+/?	D	P	Local				Policy should stress the value of multifunctional green infrastructure, recognising the economic and social value sites can deliver. Larger, strategic sites should contribute to creation of new multifunctional green infrastructure within the sites themselves, but also attempt to connect to existing sites through green and blue corridors. New sites should be accessible to existing communities as well as proposed future residents.
		Ensure access to green infrastructure providing opportunities for recreation, amenity and tranquillity?	+/?	+/?	+/?	D	P	Local				As above.
12	Ensure communities, developments and infrastructure are resilient to the effects of expected	Ensure that communities, existing and new developments and infrastructure systems are resilient to the predicted effects of	+/-	+/-	+/-	D	P	Local / GM	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	The main climate change risks to GM are flooding and the urban heat island effect. Under this option there would be some high-density development that could contribute to the urban heat island and put pressure building on cooling urban green spaces. There could also be pressure on drainage infrastructure in the urban areas, which if not invested	Potential cumulative effects of climate change if unmitigated could be impacts on human health and biodiversity as a result of the urban heat island effect and damage to drainage infrastructure, human health and wellbeing and housing provision of flooding.	GMSF policies should ensure new development and infrastructure are designed to mitigate the impacts of climate change.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	climate change	climate change across GM?								in could potentially contribute to increases in the frequency and severity of local flood events. However, if new development is designed in line with best practice on flooding, drainage, provision of green space and design than the impacts of climate change could be mitigated.		
13	Reduce the risk of flooding to people and property	Restrict the development of property in areas of flood risk?	o	o	+	D	P	Local / GM	Receptors: flood risk areas Affected groups: residents in or near to flood risk areas	As long as new development is designed to best practice, planning policy guidance and legislation on reducing flooding risk, this option is likely to have no impact on reducing the risk of flooding to people and property. There is the possibility that where a brownfield site is redeveloped, and drainage standards are applied that this could lead to a reduction in surface water run off compared to the present situation. However, this relies on districts or GM having appropriate drainage standards. The GM SFRA has mapped flood extents taking into account climate change which will help to ensure development is appropriately future proofed Although areas of Green Belt are proposed for development there is opportunity to address existing flooding issues and provide a positive solution to these in the long term	Increased risk of flooding	Policy should reinforce existing guidance and best practice. Policy should link to other agendas, such as those relating to green infrastructure, biodiversity, recreation and health.
		Ensure adequate measures are in place to manage existing flood risk?	o	o	+	D	P	Local / GM				As above.
		Ensure that development does not increase flood risk due to increased run-off rates?	o	o	+	D	P	Local / GM				As above.
		Ensure development is appropriately future proof to accommodate future levels of flood risk including from climate change?	o	o	+	D	P	Local / GM				Policies should include appropriate drainage standards.
14	Protect and improve the quality and availability of water resources	Encourage compliance with the Water Framework Directive?	o	o	o	D	P	Local / GM	Receptors: water courses, ground water, water supplies Affected groups: Various	There is a strong regulatory framework that development must comply with. Measures associated with water quality are therefore assumed to be embedded within any new development. As such, a basic level of compliance is assumed	Both quality and availability of water resources may be reduced	Policy should reinforce existing guidance and best practice in new development, and also seek to bring about improvements in the conurbations surface water network, linking to other agendas.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		Promote management practices that will protect water features from pollution?	o	o	o	D	P	Local / GM		across all new development associated with this option. Overall, no additional effect is anticipated as a result of this 0ption, with the exception of water consumption, which will increase with a net increase in overall housing and employment land.		As above.
		Avoid consuming greater volumes of water resources than are available to maintain a healthy environment ?	o	o	o	D	P	Local / GM				Policy should encourage design in new developments which encourages sustainable water use. This should include housing and employment. Include in design guide recommendation. Continue to liaise with United Utilities as GMSF progresses.
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas emissions	Encourage reduction in energy use and increased energy efficiency?	+/-	+/-	+/-	D	P	Local / GM	Receptors: Climate Affected groups: All	Under this option the population and economic activity in GM will increase from the baseline which will have an impact on demand for energy. This option includes encouraging use of public transport and reduces the need to travel by located homes and businesses close to each other, which in turn reduces the need to travel and use energy.	Increased greenhouse gas emissions and reliance on non-renewable energy resources.	The GMSF should exploit low carbon infrastructure technologies. Policy should encourage design in new developments which encourages sustainable energy use.
		Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments?	+/?	+/?	+/?	D	P	Local / GM				Policy should encourage the development of low carbon facilities to decouple economic activity with carbon emissions. This should focus on aspects such as energy generation, transport and buildings. Policy should also ensure integration of low carbon/renewable technology in conventional developments.
		Promote a proactive reduction in direct and indirect greenhouse gas emissions emitted across GM?	+/?	+/?	+/?	D	P	Local / GM				. Policy should include a carbon neutral target.
16	Conserve and/or enhance landscape,	Improve landscape quality and the character	?	?	?/-	D	P	Local	Receptors: protected landscapes and/or built heritage assets. Protected or locally	Under this option, developing land in Green Belt on the edge of the urban area might have an impact on the character of the existing	Landscape quality is reduced, and character is lost from various assets until it is diminished.	The GMSF should protect key environmental assets through policy, key landscape/townscape/heritag

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	townscape, heritage assets and their setting and the character of GM	of open spaces and the public realm?							significant views Affected groups: Non identified	landscape and townscapes. Within the urban area they may also be some pressure to build on or adjacent to green and public realm spaces which may have an impact too. Nevertheless, some developments will be subject to specialist assessments such as EIA, landscape assessments and heritage impact assessments to mitigate impacts. However, there is some uncertainty on the impacts. Development in the Green Belt across GM may enable the positive enhancement of heritage assets and landscapes within the vicinity of the development.		e assets should be listed for protection. This may include some views to/from key assets. Policy should also seek to improve areas where public realm (etc.) requires improvement, recognising the multiple benefits associated with such improvements (recreation/health, social interaction, crime reduction, ecology, heritage etc). Policy should recognise the importance of "networks" as well as individual sites/spaces, linking blue/green corridors to maximise various benefits (e.g. ecology benefits, recreation, sustainable transport potential and social cohesion). Include in design guide recommendation.
		Conserve and enhance the historic environment, heritage assets and their setting?	?	?	?	D	P	Local				Heritage Impact Assessment required to identify any impacts from sites, to conserve and enhance heritage assets and their setting.
		Respect, maintain and strengthen local character and distinctiveness?	?	?	?/-	D	P	Local				Local policies should set out design expectations and codes
17	Ensure that land resources are allocated and used in an efficient and sustainable manner to meet the housing and employment needs of GM, whilst reducing	Support the development of previously developed land and other sustainable locations?	+	+	+	D	P	Local / GM	Receptors: greenfield and brownfield land Affected groups: Non identified	This option includes developing previously developed land and other sustainable locations. Some Green Belt land would be required to be developed with this option, so without further investigation, there is a risk that the best and most versatile agricultural land could be developed. This option encourages the redevelopment of derelict land,	Loss of greenfield land.	The GMSF should include a policy about avoiding the development of the best and most versatile agricultural and where it is possible.
		Protect the best and most versatile agricultural land / soil resources	-/?	-/?	-/?	D	P	Local / GM				

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any <u>specific sensitive receptors</u> where they have been identified	Potential cumulative effects	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	land contamination	from inappropriate development?								properties, buildings and infrastructure. This option supports reductions in land contamination through the remediation and reuse of previously developed land.		
		Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses?	+	+	+	D	P	Local / GM				
		Support reductions in land contamination through the remediation and reuse of previously developed land?	+	+	+	D	P	Local / GM				
18	Promote sustainable consumption of resources and support the implementation of the waste hierarchy	Support the sustainable use of physical resources?	o	-/?	-/?	D	P	Local / GM	Receptors: waste disposal facilities, finite resources. Affected groups: All those in new development	This sees development continue at quicker rates than at present. This will increase the use of resources including non-renewables. Development will also continue to produce waste during construction and operation. Municipal waste will increase if housing provision increases (assuming this represents an increase in population). Construction and demolition. Municipal waste will increase if housing provision increases (assuming this represents an increase in population). Construction and demolition waste from increased building activity will also result and will likely be the most significant factor that affects waste disposal	Waste generation with other schemes; intra-development effects as a number of locations are taken forward	Set design principles based on realistic expectations for new development. Require new developments of a certain size to meet design principles in terms of resources use (including recycled materials). This should relate to construction and operation
		Promote movement up the waste hierarchy?	o	-/?	-/?	D	P	Local / GM				None identified
		Promote reduced waste generation rates?	o	-/?	-/?	D	P	Local / GM				None identified

Appendix C – 2020 IA matrices (Arup, August 2020) on 2 additional spatial options developed for 2020 draft GMSF

See accompanying assessment tables.

Spatial Option 3 - Public Transport Max

Ref	Objective	Assessment criteria....will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any specific sensitive receptors where they have been identified	Potential cumulative effects	Potential mitigation or enhancement?	Mitigation / policy input	
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)									
1	Provide a sustainable supply of housing land including for an appropriate mix of sizes, types, tenures in locations to meet housing need, and to support economic growth	Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and affordable housing?	+	++	++	D	P	Local / GM	Receptors: housing market, local / GM population where sites come forward Affected groups: Housing with an undersupply of green infrastructure is more likely to affect those already living in deprivation and with disabilities	Option 3 would meet the LHN and therefore meet the appropriate quantity of housing. Due to the being focused around sustainable transport hubs, both urban and otherwise, a mix of housing types would be available and land would most likely be well-connected with employment land as shown by the potentially positive or uncertain effect. However, housing is likely to be high-density due to its location near hubs.	Could have cumulative socio-economic and environmental effects with other local development schemes.	Enhance	None identified	
		Ensure an appropriate mix of types, tenures and sizes of properties in relation to the respective levels of local demand?	+ / ?	+ / ?	+ / ?	D	P	Local / GM				Enhance	None identified	
		Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate?	+ / ?	+ / ?	+ / ?	D	P	Local / GM				Enhance	Ensure a strategic approach is taken to link up housing sites with employment land and green spaces	
		Support improvements in the energy efficiency and resilience of the housing stock?	o	o / +	o / +	D	P	Wider				Enhance	GMSF should ensure energy efficiency is covered by policy e.g., energy assessments for new developments	
2	Provide a sustainable supply of employment land to ensure sustainable economic growth and job creation	Meet current and future demand for employment land across GM?	o / -	-	-	D	P	Local / GM	Receptors: GM population and GM economy Affected groups: widespread effects	As this option utilises existing land supply near transport hubs, this would limit the development of larger employment clusters, and therefore not meet future demand for employment land. Land would be well-served by infrastructure. However, it is uncertain if the transport network would become too stressed over time.	Could have cumulative socio-economic and environmental effects with other local development schemes.	Mitig	Ensure the GMSF considers a strategic approach for larger clusters of employment space e.g. innovation districts	
		Support education and training to provide a suitable labour force for future growth?	o	o	o	I	P	GM				Enhance	None identified	
		Provide sufficient employment land in locations that are well-connected and well-served by infrastructure?	? / +	? / +	? / +	D	P	Local / GM				Enhance	GMSF policy should ensure transport capacity is adequate to keep up with the growth of employment land; engagement should take place with TfGM	
3	Ensure that there is sufficient coverage and capacity of transport and utilities to support growth and development	Ensure that the transport network can support and enable the anticipated scale and spatial distribution of development?	+	+	+	D	P	GM	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	Option 3 focuses development around sustainable transport hubs, whether they are near urban centres or not. The transport network would therefore be equipped to handle the spatial distribution of development for these areas. However it is not clear whether utilities and digital infrastructure could support this growth.	Could have cumulative socio-economic and environmental effects with other local development schemes.	Enhance	GMSF should ensure a strategic approach for the transport network and necessary discussions with TfGM	
		Improve transport connectivity?	+	+	+	D	P	GM				Enhance	None identified	
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development?	?	?	?	D	P	GM				Mitig	Ensure utilities and digital infrastructure providers are consulted from the earliest stage of development	
4	Reduce levels of deprivation and disparity	Reduce the proportion of people living in deprivation?	o	o	o	I	P	Local / GM	Receptors: none identified Affected groups: those identified as living in deprivation	As this option focuses development on existing sustainable locations, it is anticipated to have a neutral effect on reducing the proportion of people living in deprivation.	Link to other initiatives or investments (e.g. apprenticeships, health initiatives, education and/or skills programmes)	Enhance	Policy should ensure economic benefits from development stay in the local area and positively affect those in the most deprived areas to reduce the proportion of people in deprivation	
		Support reductions in poverty (including child and fuel poverty), deprivation and disparity across the domains of the Indices of Multiple Deprivation?	o	o	o	I	P	Local / GM				Enhance	As above	
5	Promote equality of opportunity and the elimination of discrimination	Foster good relations between different people?	?	?	?	I	P	Local	Receptors: none identified Affected groups: various, depending on locality	As development near sustainable transport hubs is likely to be high-density, it is uncertain the effect on relations between different people. However, Option 3's concentration of development near these hubs will have a positive effect on access to facilities and infrastructure.	Potential link to other initiatives which seek to integrate communities	Enhance	Ensure high-density development has social wellbeing requirements in order to improve relations between various groups	
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?	+	+	+	D	P	Local				Enhance	GMSF should ensure capacity of facilities and infrastructure can withstand the increased density in these areas	
		Ensure no discrimination based on 'protected characteristics', as defined in the Equality Act 2010?	o	o	o	I	P	Local				Enhance	None identified	
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	? / +	? / +	? / +	D	P	GM				Enhance	Needs should be assessed as individual sites come forward for development	
6	Support improved health and wellbeing of the population and reduce health inequalities	Support healthier lifestyles and support improvements in determinants of health?	o	?	?	I	P	Local / GM	Receptors: built environment, air quality Affected groups: various	Option 3 would promote connectivity to transport hubs but not necessarily accessibility to green space; additionally, pressure on green space near these concentrated development locations would increase over time. Although development would be well-served by infrastructure and thus potentially increasing health and wellbeing of residents, it is uncertain whether the high-density would impede on determinants of health.	Improved health and reduced health inequalities through positive planning and the promotion of green spaces	Mitig	Include minimum housing standards to ensure high-density housing is of a high quality	
		Reduce health inequalities within GM and with the rest of England?	o	? / -	? / -	I	P	Local / GM				Enhance	As above	
		Promote access to green space?	o	? / -	? / -	D	P	Local / GM				Enhance	Ensure development proposals include nearby provision for adequate green space	
7	Ensure access to and provision of appropriate social infrastructure	Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status?	o	? / -	? / -	D	P	Local / GM	Receptors: GM population Affected groups: all groups will be affected by this	As land is concentrated around transport hubs, there will be limited supply of land to develop new social infrastructure. Therefore, provision of land for these facilities is uncertain and existing services could experience capacity issues.	Increased access coupled with population growth may present capacity issues	Enhance	Ensure a strategic approach is taken to connect housing sites with existing or proposed facilities	
		Ensure sufficient access to educational facilities for all children?	o	? / -	? / -	D	P	Local / GM				Enhance	As above	
		Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?	o	? / -	? / -	D	P	Local / GM				Enhance	As above	
8	Support improved educational attainment and skill levels for all	Improve education levels of children in the area, regardless of their background?	o	? / +	? / +	I	P	Local / GM	Receptors: GM population and the GM economy Affected groups: various / all	As development comes forward, provision should be included for new educational facilities. Development itself will also see an increase in jobs in the local area, which will indirectly improve of those in the construction industry.	Capacity issues if facilities are not developed at same rate as residential developments	Enhance	GMSF should include policy which strategically supports provision of schools, especially in areas with an undersupply	
		Improve educational and skill levels of the population of working age?	o	? / +	? / +	I	P	Local / GM				Enhance	GMSF should seek opportunities to link development with training	
9	Promote sustainable modes of transport	Reduce the need to travel and promote efficient patterns of movement?	+	+	+	D	P	Local / GM	Receptors: GM population, transport network Affected groups: Various	Option 3 prioritises the development of sites near sustainable transport hubs and therefore aligns strongly with this objective.	Changes in travel patterns as people begin to take advantage of public transport as their main form of transport	Enhance	GMSF should emphasise a strategic approach to sustainable transport, including looking at planned development with expected demand	
		Promote a safe and sustainable public transport network that reduces reliance on private motor vehicles?	+	++	++	D	P	Local / GM				Enhance	Transport policy should focus on linking housing and employment land with truly sustainable options of travel in order to discourage car use	
		Support the use of sustainable and active modes of transport?	+	++	++	D	P	Local / GM				Enhance	As above	
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	o	? / +	? / +	D	p	Local / GM	Receptors: the atmosphere Affected groups: those affected by poor AQ (see living environment deprivation (outdoor))	This option focuses development near public transport and therefore should reduce the need to travel by private car, thus improving air quality.	Increased trips by private motor vehicle will worsen the air quality over time if sustainable modes are not utilised	Enhance	Address strategic air quality through discussions with TfGM concerning the GM Clean Air Plan	
11	Conserve and enhance biodiversity, green infrastructure and geodiversity assets	Provide opportunities to enhance new and existing wildlife and geological sites?	o	o	? / -	D	P	Local / GM	Receptors: wildlife, landscapes and green spaces Affected groups: Various	This option focuses development within the urban area or around sustainable transport hubs. There is likely to be increased pressure and potentially a negative effect on green spaces serving these locations.	Impact on biodiversity assets may occur in conjunction with other developments	Enhance	The GMSF should take a strategic approach to the management of wildlife and geological sites. Biodiversity net gain is one tool to enhance existing sites	
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	o	o	? / -	D	P	Local / GM				Enhance	The GMSF should actively avoid harm to designated sites and should mandate that proposed development includes supporting documentation to appraise impact on relevant sites	
		Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure?	?	?	? / -	D	P	Local / GM				Mitig	Policy should emphasise the importance of multifunctional green infrastructure, highlighting both economic, social and environmental value of these spaces. A strategic approach should be taken to ensure maximum environmental benefits for GM	
		Ensure access to green infrastructure providing opportunities for recreation, amenity and tranquillity?	?	?	? / -	D	P	Local				Mitig	As above	
12	Ensure communities, developments and infrastructure are resilient to the effects of expected climate change	Ensure that communities, existing and new developments and infrastructure systems are resilient to the predicted effects of climate change across GM?	?	? / -	? / -	D / I	P	Local / GM	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	As this option focuses development near existing hubs, there is potential for a negative effect in regard to exacerbating the urban heat island effect of these areas.	Increased urban heat island effect and flood risk in combination with other development	Mitig	Urban heat island mitigation should be included in new developments. The GMSF should take a strategic approach in ensuring these areas are identified and properly mitigated	
13	Reduce the risk of flooding to people and property	Restrict the development of property in areas of flood risk?	?	?	?	D	P	Local	Receptors: flood risk areas Affected groups: residents in or near to flood risk areas	The option focuses development in already developed areas and therefore should have a mostly neutral effect against this flooding objective. In the long term, spatial distribution of development in this option should not significantly increase run-off rates.	Other development which may affect flood risk and increase likelihood of flooding	Mitig	Policy should reinforce existing guidance on flood risk, specifically steering away from developing in areas of flood risk	
		Ensure adequate measures are in place to manage existing flood risk?	o	o	o	D	P	Local				Enhance	As above	
		Ensure that development does not increase flood risk due to increased run-off rates?	o	o	+	D	P	Local				Enhance	Policy should incorporate sustainable urban drainage	
		Ensure development is appropriately future proof to accommodate future levels of flood risk including from climate change?	o	o	+	D	P	Local				Enhance	As above	
14	Protect and improve the quality and availability of water resources	Encourage compliance with the Water Framework Directive?	o	o	o	I	P	Wider	Receptors: water courses, ground water, water supplies Affected groups: Various	WFD contains framework which development must comply with. Therefore, it is assumed these measures will be embedded in proposed development.	Both quality and availability of water resources may be impacted by other development	Enhance	Policy should reinforce existing guidance on water quality and availability	
		Promote management practices that will protect water features from pollution?	o	o	o	D	P	Local				Enhance	As above	
		Avoid consuming greater volumes of water resources than are available to maintain a healthy environment?	o	o	o	D	P	Wider				Enhance	GMSF should include policy which encourages sustainable water use throughout the development lifecycle	
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas emissions	Encourage reduction in energy use and increased energy efficiency?	+	+	+ / -	D	P	GM / Wider	Receptors: Climate Affected groups: All	This option would emphasise usage of the sustainable transport network and would see a positive effect on energy efficiency and reduction of greenhouse gases. However, in the long-term, the local transport network could encounter stress from over-capacity which could increase personal car journeys, thereby having a negative effect.	GI will help mitigate the increased greenhouse gas emissions are more developments are built	Enhance	Policy should incorporate design guidance for sustainable energy use in buildings	
		Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments?	o	o	o	D	P	GM / Wider				Enhance	Policy should encourage renewable and low carbon facilities as priority in terms of energy generation	
		Promote a proactive reduction in direct and indirect greenhouse gas emissions emitted across GM?	+	+	+ / -	D	P	GM / Wider				Enhance	Policy should incorporate a carbon neutral target; discussions with TfGM will faciliate proactive reduction in vehicular GHG emissions	

16	Conserve and/or enhance landscape, townscape, heritage assets and their setting and the character of GM	Improve landscape quality and the character of open spaces and the public realm?	?	?	?	D	P	Local / GM	Receptors: protected landscapes and/or built heritage assets. Protected or locally signficant views Affected groups: Non identified	It is uncertain how this option will affect landscape quality and character of open spaces, when development is concentrated around existing hubs. There is a potential long-term negative effect on the historic environment and its setting, if development is near heritage assets. As development is focused on increasing existing built areas, local distinctiveness should positively increase over time.	Landscape and heritage may be eroded over time as development comes forward	Enhance	GMSF should include policy which protect natural and built assets	
		Conserve and enhance the historic environment, heritage assets and their setting?	?	?	? / -	D	P	Local / GM				Mitig	Heritage Impact Assessments should be required to identify assets and any detrimental impact	
		Respect, maintain and strengthen local character and distinctiveness?	o	+	++	D	P	Local / GM				Enhance	District policy should cover design codes for various areas within a district	
17	Ensure that land resources are allocated and used in an efficient and sustainable manner to meet the housing and employment needs of GM, whilst reducing land contamination	Support the development of previously developed land and other sustainable locations?	++	++	++	D	P	Local / GM	Receptors: greenfield and brownfield land Affected groups: Non identified	Option 3 will promote development on previously developed, brownfield land and locations near sustainable transport links. It therefore performs well against this objective.	Loss of greenfield land as it is developed incrementally	Enhance	Explore how development of brownfield land can enable development in the surrounding area	
		Protect the best and most versatile agricultural land / soil resources from inappropriate development?	+	+	+	D	P	Local / GM				Enhance	Policy should ensure versatile agricultural land is protected	
		Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses?	++	++	++	D	P	Local / GM				Enhance	Explore how development of brownfield land can enable development in the surrounding area	
		Support reductions in land contamination through the remediation and reuse of previously developed land?	+	+	+	D	P	Local / GM				Enhance	As above	
18	Promote sustainable consumption of resources and support the implementation of the waste hierarchy	Support the sustainable use of physical resources?	o	o	o	D	P	GM / Wider	Receptors: waste disposal facilities, finite resources. Affected groups: All those in new development	This option is considered to have a neutral effect on waste as development is concentrated on already built areas.	Waste generation with other schemes; intradevelopment effects as a number of locations are taken forward	Enhance	Design codes should ensure sustainable use of resources during construction and operation	
		Promote movement up the waste hierarchy?	o	o	o	D	P	GM / Wider				Enhance	As above	
		Promote reduced waste generation rates?	o	o	o	D	P	GM / Wider				Enhance	As above	

Spatial Option 5 - Decentralised Sub-Urban

Ref	Objective	Assessment criteria….will the GMSF	Assessment			Majority of effects are: direct (D) or indirect (I)	Majority of effects are: Temporary (T) or Permanent (P)	Spatial consideration: Local, GM, Wider	Receptors and/or Affected groups (see key)	Explanation / summary against overall objective Note: Draw out any specific sensitive receptors where they have been identified	Potential cumulative effects	Potential mitigation or enhancement	Mitigation / policy input
			ST (0-4 years)	MT (5-9 years)	LT (10+ years)								
1	Provide a sustainable supply of housing land including for an appropriate mix of sizes, types, tenures in locations to meet housing need, and to support economic growth	Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and affordable housing?	-	-	-	D	P	Local / GM	Receptors: housing market, local / GM population where sites come forward Affected groups: Housing with an undersupply of green infrastructure is more likely to affect those already living in deprivation and with disabilities	Option 5 would not meet GM's LHN nor would it ensure an appropriate mix of housing. Growth would be located at the edge of the urban area and would therefore not be well-connected to centres. An increase in low-density development could have a negative effect on the resilience of the housing stock. Overall, this option performs mostly negative against this objective.	Could have cumulative socio-economic and environmental effects with other local development schemes.	Mitig	Identify additional land supply in order to meet LHN
		Ensure an appropriate mix of types, tenures and sizes of properties in relation to the respective levels of local demand?	-	-	-	D	P	Local / GM				Mitig	Ensure a strategic approach is taken to provide an appropriate mix of housing for local demand
		Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate?	-	-	-	D	P	Local / GM				Mitig	A strategic approach is required to ensure sites are linked to employment, centres and green space
		Support improvements in the energy efficiency and resilience of the housing stock?	o	? / -	? / -	D	P	Wider				Enhance	GMSF policy should include a requirement for Energy Assessment to be submitted for new developments
2	Provide a sustainable supply of employment land to ensure sustainable economic growth and job creation	Meet current and future demand for employment land across GM?	-	-	-	D	P	Local / GM	Receptors: GM population and GM economy Affected groups: widespread effects	Employment land would be located away from the Core Growth Area and a diverse range of sites would not be provided with Option 5. This would have a negative effect on meeting demand for employment land as well as provision of well-connected land.	Could have cumulative socio-economic and environmental effects with other local development schemes.	Mitig	GMSF should consider a strategic approach to ensuring the development of brownfield land
		Support education and training to provide a suitable labour force for future growth?	o	o	o	I	P	GM				Enhance	GMSF should identify links with skills programmes
		Provide sufficient employment land in locations that are well-connected and well-served by infrastructure?	-	-	-	D	P	Local / GM				Mitig	Include policy for adequate delivery of transport infrastructure
3	Ensure that there is sufficient coverage and capacity of transport and utilities to support growth and development	Ensure that the transport network can support and enable the anticipated scale and spatial distribution of development?	-	-	-	D	P	GM	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	It is anticipated that this option would have a wholly negative effect on this objective. Housing and employment locations would be dispersed beyong the edge of the urban area, thereby putting increased pressure on the transport network and negatively impact transport connectivity. Digital infrastructure would be under increased pressure to upgrade infrastructure.	Could have cumulative socio-economic and environmental effects with other local development schemes.	Mitig	Consider a strategic approach to selecting development sites located near sustainable transport hubs; consult with TfGM to ensure transport network can support this distribution of growth
		Improve transport connectivity?	-	-	-	D	P	GM				Mitig	As above
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development?	-	-	-	D	P	GM				Mitig	Ensure utilities / digital infrastructure partners are consulted on development proposals
4	Reduce levels of deprivation and disparity	Reduce the proportion of people living in deprivation?	o	-	-	I	P	Local / GM	Receptors: none identified Affected groups: those identified as living in deprivation	This option would decrease accessibility to employment sites and would therefore have a negative impact on those seeking job opportunities, such as those in the most deprived wards.	Link to other initiatives or investments (e.g. apprenticeships, health initiatives, education and/or skills programmes)	Mitig	Ensure employment sites are strategically located near the public transport network; a strategic approach should also be taken to ensure employment and housing sites are well-connected to each other
		Support reductions in poverty (including child and fuel poverty), deprivation and disparity across the domains of the Indices of Multiple Deprivation?	o	-	-	I	P	Local / GM				Mitig	As above
5	Promote equality of opportunity and the elimination of discrimination	Foster good relations between different people?	o	-	-	I	P	Local	Receptors: none identified Affected groups: various, depending on locality	Development would be located away from the Core Growth area; poor connectivity would impede relations between different people and would have a negative impact on accessing facilities and infrastructure. Needs of the urban areas, which include deprived wards, would be overlooked with the focus on sub-urbanisation.	Potential link to other initiatives which seek to integrate communities	Mitig	Integrate new communities with existing ones and ensure provision of enhanced transport links
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?	o	-	-	D	P	Local				Mitig	GMSF should incorporate policy on social infrastrature; new development should be required to ensure access to nearby facilities
		Ensure no discrimination based on 'protected characteristics', as defined in the Equality Act 2010?	-	-	-	I	P	Local				Mitig	None identified
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	-	--	--	D	P	GM				Mitig	GMSF should ensure a strategic approach is taken to address needs of varying areas
6	Support improved health and wellbeing of the population and reduce health inequalities	Support healthier lifestyles and support improvements in determinants of health?	o	-	-	I	P	Local / GM	Receptors: built environment, air quality Affected groups: various	As new development would be located mostly on the urban fringe, access to green space on these sites would demonstrate a positive effect. However, this option would have indirect, negative impacts on supporting overall improvement in the determinants of health.	Improved health and reduced health inequalities through positive planning and the promotion of green spaces	Mitig	Emphasise the benefits of active travel and ensure sites coming forward have access to amenities
		Reduce health inequalities within GM and with the rest of England?	o	-	--	I	P	Local / GM				Mitig	GMSF should take a strategic approach to identifying inequalities across GM
		Promote access to green space?	o	+	+	D	P	Local / GM				Enhance	Emphasise the health benefits of spending time in nature
7	Ensure access to and provision of appropriate social infrastructure	Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status?	o	-	--	D	P	Local / GM	Receptors: GM population Affected groups: all groups will be affected by this	As sites for this option will be concentrated at the edge of the urban area and beyond, there will be a negative impact in the medium- and long-term in regard to ensuring suffcient access to social infrastructure. The sprawl of sites could see an increasingly negative effect in more deprived areas if sites are not adequately connected to sustainable transport links.	Increased access coupled with population growth may present capacity issues	Mitig	GMSF should take a strategic approach to identifying sustainable locations for healthcare facilities throughout GM
		Ensure sufficient access to educational facilities for all children?	o	-	-	D	P	Local / GM				Mitig	Ensure development includes provision for educational / play facilities
		Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?	o	-	-	D	P	Local / GM				Mitig	As above
8	Support improved educational attainment and skill levels for all	Improve education levels of children in the area, regardless of their background?	o	? / -	? / -	I	P	Local / GM	Receptors: GM population and the GM economy Affected groups: various / all	Improvement of educational levels would demonstrate a potentially uncertain or negative effect; if sites are dispersed, those from lower income backgrounds would be negative impacted by sites not being located in sustainable locations.	Capacity issues if facilities are not developed at same rate as residential developments	Enhance	Ensure provision is made for education facilities as new development comes forward beyond the urban fringe
		Improve educational and skill levels of the population of working age?	o	?	?	I	P	Local / GM				Mitig	GMSF should encourage linking new development with training opportunities
9	Promote sustainable modes of transport	Reduce the need to travel and promote efficient patterns of movement?	-	--	--	D	P	Local / GM	Receptors: GM population, transport network Affected groups: Various	This spatial option would have a negative effect on this objective. Due to development being dispersed, focus would shift away from the Core Growth Area to the urban fringe, thereby increasing the need to travel and encouraging private motor vehicle use.	Changes in travel patterns as people begin to take advantage of public transport as their main form of transport	Mitig	GMSF should ensure a strategic approach is taken for sustainable transport in order to link dispersed development with appropriate transport links
		Promote a safe and sustainable public transport network that reduces reliance on private motor vehicles?	-	--	--	D	P	Local / GM				Mitig	As above
		Support the use of sustainable and active modes of transport?	-	--	--	D	P	Local / GM				Mitig	As above
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	o	-	-	D	p	Local / GM	Receptors: the atmosphere Affected groups: those affected by poor AQ (see living environment deprivation (outdoor))	Home-working and an increased role for smaller town centres could reduce travel and therefore air quality impact; but overall, the dispersed settlement associated with this option would increase car dependency and make sustainable transport inaccessible to a large portion of the population. Overall, this option would have a negative impact on air quality in GM.	Increased trips by private motor vehicle will worsen the air quality over time if sustainable modes are not utilised	Mitig	Address strategic air quality through discussions with TfGM concerning the GM Clean Air Plan
11	Conserve and enhance biodiversity, green infrastructure and geodiversity assets	Provide opportunities to enhance new and existing wildlife and geological sites?	o	? / -	? /-	D	P	Local / GM	Receptors: wildlife, landscapes and green spaces Affected groups: Various	Dispersed sites associated with this option would be located closer to green space beyond the urban fringe, demonstrating a positive effect on access to green infrastructure. However, the scattered settlement approach could also potentially have a negative effect on avoiding damage to wildlife or protected sites, as these sites could be viewed as prime development locations through this option.	Impact on biodiversity assets may occur in conjunction with other developments	Enhance	GMSF should ensure a strategic approach to the protection and enhancement of ecological sites
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	o	? / -	? / -	D	P	Local / GM				Enhance	As above
		Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure?	o	? / +	? / +	D	P	Local / GM				Enhance	Policy should emphasise the importance of multifunctional green infrastructure by stressing its social, economic, and environmental benefits
		Ensure access to green infrastructure providing opportunities for recreation, amenity and tranquillity?	o	+	+	D	P	Local				Enhance	Health benefits should be stressed for spending time in nature
12	Ensure communities, developments and infrastructure are resilient to the effects of expected climate change	Ensure that communities, existing and new developments and infrastructure systems are resilient to the predicted effects of climate change across GM?	o	-	-	D / I	P	Local / GM	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	Home-working and an increased role for smaller town centres could reduce travel and therefore increase resiliency to climate change; but overall, the dispersed settlement associated with this option would increase car dependency and make sustainable transport inaccessible to a large portion of the population. Overall, this option would have a negative impact on ensuring systems are resilient to climate change.	Increased urban heat island effect and flood risk in combination with other development	Mitig	GMSF should ensure a strategic approach to settlement, to ensure development is well-served by sustainble transport links
13	Reduce the risk of flooding to people and property	Restrict the development of property in areas of flood risk?	o	? / -	? / -	D	P	Local	Receptors: flood risk areas Affected groups: residents in or near to flood risk areas	Spatial Option 5 takes a scattered approach to development which would increase the distribution of development and thus increase the distribution of impermeable surfaces, having a negative impact on run-off rates.	Other development which may affect flood risk and increase likelihood of flooding	Enhance	Policy should reinforce existing guidance on flood risk, specifically steering away from developing in areas of flood risk
		Ensure adequate measures are in place to manage existing flood risk?	o	o	o	D	P	Local				Enhance	As above
		Ensure that development does not increase flood risk due to increased run-off rates?	o	-	-	D	P	Local				Mitig	GMSF should include policy mandating sustainable urban drainage in new development
		Ensure development is appropriately future proof to accommodate future levels of flood risk including from climate change?	o	? / -	? / -	D	P	Local				Enhance	As above
14	Protect and improve the quality and availability of water resources	Encourage compliance with the Water Framework Directive?	o	o	o	I	P	Wider	Receptors: water courses, ground water, water supplies Affected groups: Various	New development must comply with regulatory framework in terms of water quality and availability.	Both quality and availability of water resources may be impacted by other development	Enhance	GMSF should enforce best practice for proposed development
		Promote management practices that will protect water features from pollution?	o	o	o	D	P	Local				Enhance	As above
		Avoid consuming greater volumes of water resources than are available to maintain a healthy environment?	o	o	o	D	P	Wider				Enhance	GMSF should include policy mandating sustainable urban drainage in new development
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas	Encourage reduction in energy use and increased energy efficiency?	o	-	-	I	P	GM / Wider	Receptors: Climate Affected groups: All	This option encourages car dependency and therefore has an increasingly negative impact on reduction of greenhouse gas emissions.	GI will help mitigate the increased greenhouse gas emissions are more developments are built	Mitig	Policy should encourage sustainable energy use throught the development lifecycle
		Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments?	o	o	o	D	P	GM / Wider				Enhance	GMSF should encourage renewable and low carbon energy in preference to other sources

	greenhouse gas emissions	Promote a proactive reduction in direct and indirect greenhouse gas emissions emitted across GM?	-	-	--	D	P	GM / Wider				Mitig	Ensure a strategic approach is taken to selecting sites which are well-served by sustainable transport options
16	Conserve and/or enhance landscape, townscape, heritage assets and their setting and the character of GM	Improve landscape quality and the character of open spaces and the public realm?	o	o	o	D	P	Local / GM	Receptors: protected landscapes and/or built heritage assets. Protected or locally signficant views Affected groups: Non identified	As Option 5 takes a dispersed approach to development sites, it is considered to be low pressure on heritage sites and therefore, have a neutral effect against this objective.	Landscape and heritage may be eroded over time as development comes forward	Enhance	Policy should afford protection to natural and built assets
		Conserve and enhance the historic environment, heritage assets and their setting?	o	o	o	D	P	Local / GM				Enhance	Heritage Impact Assessments to be required for relevant proposed development
		Respect, maintain and strengthen local character and distinctiveness?	o	o	o	D	P	Local / GM				Enhance	District policy should set design codes for varying areas
17	Ensure that land resources are allocated and used in an efficient and sustainable manner to meet the housing and employment needs of GM, whilst reducing land contamination	Support the development of previously developed land and other sustainable locations?	-	--	--	D	P	Local / GM	Receptors: greenfield and brownfield land Affected groups: Non identified	Previously developed land would be underutilised through this spatial option, as development is sought for the edge of the urban area and beyond. It would show a negative effect against this objective.	Loss of greenfield land as it is developed incrementally	Mitig	Emphasise the value of redeveloping brownfield land and ensure GMSF takes a strategic approach
		Protect the best and most versatile agricultural land / soil resources from inappropriate development?	o	? / -	? / -	D	P	Local / GM				Enhance	As above
		Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses?	-	--	--	D	P	Local / GM				Mitig	As above
		Support reductions in land contamination through the remediation and reuse of previously developed land?	o	-	-	D	P	Local / GM				Mitig	As above
18	Promote sustainable consumption of resources and support the implementation of the waste hierarchy	Support the sustainable use of physical resources?	o	o	o	D	P	GM / Wider	Receptors: waste disposal facilities, finite resources. Affected groups: All those in new development	Neutral/no effect against this objective and assessment criteria anticipated	Waste generation with other schemes; intradevelopment effects as a number of locations	Enhance	None identified
		Promote movement up the waste hierarchy?	o	o	o	D	P	GM / Wider				Enhance	None identified
		Promote reduced waste generation rates?	o	o	o	D	P	GM / Wider				Enhance	None identified