Revised Draft GMSF Spatial Options 2019

Contents

1. Introduction

1.1. This document set out the Spatial Options which have been considered in the preparation of the Revised Draft Greater Manchester Spatial Framework (GMSF) 2019. The Spatial Options have been assessed against the Integrated Assessment (IA) objectives, more information about the IA objectives and the IA of the Draft GMSF 2019 policies can be found at GMSF pages of https://www.gmconsult.org/

1.2. The IA of the Spatial Options highlights which options will contribute the most to meeting the individual objectives of the IA. This assessment has then helped to inform what is considered to be an appropriate spatial option for the GMSF.

1.3. The Integrated Assessment of the Revised Draft GMSF 2019 plan has been completed by Ove Arup and Partners and has been published as a separate document as part of the GMSF consultation. The assessment of the Spatial Options has been completed by the GMCA and is consistent with the approach in previous GMSF IA documents.

2. Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA)

2.1. SEA is a process which ensures environmental impact is considered at the formation of plans stage (i.e. the strategic level). SA does the same, but it takes in a broader scope of impacts, looking at the economy and local communities/wider society as well as the environment (i.e. the assessment headings looked at under the banner of sustainability).

2.2. SA in the UK is mandatory under section 19 (5) of the Planning and Compulsory Purchase Act 2004, which requires a local planning authority to carry out SA of each of the proposals in a plan, during its preparation. SEA is mandatory under the Environmental Assessment of Plans and Programmes Regulations 2004 (“the SEA Regulations”).

3. Assessment of reasonable alternatives

3.1. Planning Practice Guidance (PPG) (paragraph 18) defines reasonable alternatives as the different realistic options considered by the plan maker in developing the policies in its plan and advises that they must be sufficiently distinct to highlight the different sustainability implications of each so that meaningful comparisons can be made. The alternatives must be realistic and deliverable.

3.2. In terms of assessing reasonable alternatives, the PPG states the Integrated Assessment:

- needs to compare all reasonable alternatives including the preferred approach and assess these against the baseline environment, economic and social characteristics of the area;
- predict and evaluate the effects of the preferred approach and reasonable alternatives, clearly identifying significant positive and negative effects;
- should identify, describe and evaluate the likely significant effects on environmental, economic and social factors using the evidence base.
- Must consider all reasonable alternatives in the same level of detail as the preferred approach.
- Should outline the reasons the alternatives were selected or rejected and the reasons for selecting the preferred approach in light of the alternatives.

4. GMSF Draft Vision, Strategic Objectives and Strategic Growth Options, 2015

4.1. A consultation was held in November / December 2015 on a draft vision and strategic objectives, as well as three proposed Growth Options. The Growth Options covered the broad range of future growth levels to which Greater Manchester could aspire, a summary of the Growth Options is set out in Table 1.

Table 1: GMSF Growth Options 2015

	Housing		Industry/warehousing (m^2)		Offices (m^2)	
	Total for 2014-2035	Average per annum	Total for 2014-2035	Average per annum	Total for 2014-2035	Average per annum
Option 1	152,800	7,300	2,526,000	120,300	2,573,300	122,500
Option 2	217,350	10,350	3,452,000	164,400	2,399,000	114,200
Option 3	336,000	16,000	4,050,000	192,900	2,725,000	129,800

4.2. The draft growth options were accompanied by an initial IA which helped to identify where there are differences in how each option responds to the social, economic and environmental objectives in the IA framework. The IA

was broad and indicative at this stage as the growth options did not have sufficient spatial detail to assess how they would perform, comprehensively, against the IA objectives. A summary of the IA for each option is detailed below:

4.3. Option 1: baseline land supply

Option 1 did not perform well against housing and employment provision objectives because it did not meet the objectively assessed housing and employment land needs and consequently would lead to lower levels of grow than the other options. Low levels of growth would also potentially have negative impacts on education, skills and deprivation. Given the lower level of development in this option, it may perform better against objectives related to air quality and climate change than higher growth options. However, there was insufficient detail to fully assess the option against those objectives.

4.4 Option 2: objectively assessed need

Option 2 performed well against housing and employment objectives as it would meet the objectively assessed need. This option will result in levels of development that are higher than those in recent years and consideration should therefore be given to ensuring that this higher growth rate does not result in pressure and reduced access to health and social infrastructure services and does not lead to increased environmental impacts such as increased greenhouse gas emissions and air pollution.

4.5 Option 3: Higher accelerated growth scenario

Option 3 would exceed the objectively assessed need for housing and employment land. However, it has the potential to place pressure on services and resources and would require the development of large areas of land outside of urban areas with associated potential environmental impacts such as increased greenhouse gas emissions and air pollution.

Preferred growth option

4.6 Following the close of the 2015 consultation and the IA of the Strategic Growth Options, further work was completed to update the economic forecasts, resident employment rates and population and dwelling forecasts to respond to comments made during the 2015 consultation. Having completed the additional work it was concluded that Option 2 updated to 2015 base date (227,200 net new homes, 4,000,000 sq.m industrial and warehousing floorspace and 2,450,000 sq.m of office floorspace) was necessary as it:

- Would continue GM's role in driving growth in the north of England;

- Delivers the GM's requirement to plan for at least the levels of population growth as set out in the 2014 Sub National Population Projects (SNPP); and
- Is consistent with an increase in the resident employment rate delivering on GM's strategic goal to ensure that more residents share in the benefits of economic growth.

5. Draft GMSF 2016 - Assessment of Spatial Options

5.1 The Draft GMSF 2016 considered the Spatial Options for delivering Growth Option 2: 'objectively assessed need' from the 2015 assessment. A total of four options were considered and these were subject to IA, using the same objectives and assessment criteria as previously. The Assessment of Spatial Options is available at:

http://gmsf-Consult.objective.co.uk/portal/2016consultation/supp_docs?pointId=1478517682669.

The spatial options that were considered are summarised below:

Option 1: Existing Land supply (allocations/permissions)

5.2 The existing land supply option is in effect a "business as usual" scenario. It identified no additional sites, beyond those which have already been identified by districts in their individual housing and employment land supply assessments and sites which might come forward as housing "windfall" sites. It would maintain the current density assumptions which districts have historically applied to their sites. This option would result in a minimal level of development outside the built-up area and would see no changes to the Green Belt boundary to meet the housing and employment needs of GM.

Option 2: Use GM's Existing Land Supply (allocations/permissions) with all sites received through the GMSF call for sites exercise

5.3 This option consisted of two elements – the yield from those sites in the existing land supply (ie the "do nothing" scenario); and yields from all the sites have received through the call for sites exercise.

5.4 This option includes all sites submitted, without applying policy or strategy considerations. Therefore, although it maximises the potential of the existing land supply, it also includes sites outside of the urban area including those within the Green Belt.

Option 3: GM's Existing Land Supply (allocations / permissions) together with strategic allocations to meet the OAN at a GM scale

5.5 This option would promote allocations which would maximise the opportunity to deliver the type and quality of development needed across the conurbation to deliver GM's Vision. It is designed to deliver the OAN at a GM scale. As such, it would involve re-distribution of need between districts to ensure that the most sustainable pattern of development was possible.

Option 4: GM's Existing Land Supply (allocations / permissions) together with strategic allocations to meet the OAN at the individual district level.

5.6 This option took a similar approach to Option 3, but rather than meeting the GM OAN collectively at the GM scale, it would seek to ensure that each of the ten GM districts was able to meet its own housing requirements with no re-distribution between districts.

Options performance against IA objectives

5.7 Option 1 represents business as usual and would not meet the OAN. Option 2 would significantly over-deliver housing for GM through development of smaller sites dispersed across the conurbation. Options 3 and 4 would require the development of fewer (compared to option 2) large housing and employment sites designed to meet OAN.

5.8 The assessment found that the significantly increased level of development with options 2, 3 and 4 increases the risks of problems relating to transport, air quality, greenhouse gas emissions and biodiversity loss. The scale of the development would mean that investment in transport and social infrastructure would be needed (particularly under options 3 and 4). Options 2, 3 and 4, which are likely to see extensive development of greenfield sites, were found to have potential negative effects on the development of previously developed land and the best and most versatile agricultural land. Therefore the IA of the spatial options recommended that the development of allocations should only be brought forward with a strong policy framework which reduces risks, maximises social, environmental and economic opportunities and seeks to bring about sustainable development.

Preferred Spatial Option

5.9 The IA of the Spatial Options concluded that Option 3 was strategic in nature and presented opportunities for large scale investment in housing and employment to meet the OAN and presented the best option for delivering a sustainable pattern of growth.

5.10 The background paper to the 2016 GMSF 'Approach to Accommodating the Land Supply Shortfall', October 2016, available at http://gmsf-consult.objective.co.uk/portal/2016consultation/supp_docs?pointId=1478517682669, also outlined the reasons for selecting sites to be release from Green Belt under Spatial Option 3. These reasons are summarised below:

- Maximising sustainability by focusing on a relatively small number of large-scale sites, allowing for the creation of new neighbourhoods supported by the infrastructure and services required to support sustainable development;
- Direct growth towards a few large sites rather than a greater number of diffuse, smaller sites. This will help ensure that the benefits of growth can be distributed more equitably; providing the social facilities, the physical improvements, particularly public transport, and the environmental infrastructure that a world-class city region requires as a whole to perform;
- Choosing locations primarily adjacent to the existing urban area, to minimise the effects on open countryside and the Green Belt; to make the best use of any spare infrastructure capacity in the urban area and to complement the strategy of regenerating the urban area;
- Ensuring a clear logical approach to release of Green Belt that provides a strong defensible boundary, avoids fragmentation and ensures that retained/new Green Belt is able to meet its purposes and maintain its essential characteristics of openness and permanence;
- Choosing sites where locally known environmental, physical, ownership and/or viability constraints do not significantly limit sustainable development potential; and

Choosing sites which;

- Ensure a range of housing sites across Greater Manchester to meet a variety of different housing requirements;
- Have the greatest potential to meet market demand for housing and attract skilled labour;
- Have the greatest potential to meet the future demands of the economy;
- Have the greatest potential to deliver the necessary levels of new infrastructure, including opportunities for low carbon solutions to support sustainable communities through to 2035 and beyond;
- Minimise the effects on strategic green and blue infrastructure such as the river valleys and uplands;
- Maximise the potential of new development to enhance green and blue infrastructure; and
- Respond to specific local issues across the districts.

6. Revised Draft GMSF 2019 Growth Option

6.1 The Revised Draft GMSF 2019 plans for 218,549 new homes, at least 4,220,000 sq.m of new industrial and warehousing floorspace and at least 2,460,000 sq.m of new office floorspace over the plan period 2017-2037.

6.2 The number of new homes is designed to meet the Local Housing Need (LHN) for Greater Manchester and to provide choice and flexibility in housing delivery. The Housing Topic Paper for the Revised Draft GMSF provides more information on how the housing need and supply has been calculated.

6.3 The amount of new industrial and warehousing floorspace is based on an uplift of around 25% of past development rates. The uplift is designed to secure a significant increase in the quality of accommodation across Greater Manchester to respond to evolving business requirements and increasing global competition, particularly as past industrial and warehousing completions have been constrained by a lack of suitable sites within Greater Manchester, resulting in the city-region being unable to compete for some major occupiers. The Employment Land Topic Paper for the Revise GMSF provides more information on how employment land demand and supply has been calculated.

6.4 The amount of new office floorspace is also based on an uplift of around 25% of past development rates to ensure that the continued growth of the city-region's key sectors is not constrained by a shortage of supply of new floorspace. The Employment Land Topic Paper also outlines the approach to office floorspace requirements.

6.5 The levels of growth in the Revised Draft GMSF 2019 have been designed to meet objectively assessed needs and employs the same principle as Growth Option 2: Objectively Assessed Needs that was used for the Draft GMSF 2016. The principle of meeting objectively assessed needs is essentially carried forward into the Revised Draft GMSF 2019 and remains the preferred growth option.

7. Revised Draft GMSF Objectives 2019

7.1 The GMSF 2019 has nine objectives, listed below, to support vision of the Greater Manchester Strategy, which is to make Greater Manchester one of the best places in the world to grow up, get on and grow old.

Objective 1: Meet our housing need.

We will:

- Increase net additional dwellings;

- Increase the number of affordable homes;
- Develop a Greater Manchester definition for affordable housing; and
- Provide a diverse mix of housing.

Objective 2: Create neighbourhoods of choice.

We will

- Prioritise the use of brownfield land;
- Focus new homes in the Core Growth Area and the town centres;
- Focus new homes within 800m of public transport hubs;
- Ensure that there is no increase in the number of homes and premises at a high risk of flooding; and
- Prioritise sustainable modes of transport to reduce the impact of vehicles on communities.

Objective 3: Create a thriving and productive economy in all parts of Greater Manchester.

We will:

- Ensure there is adequate development land to meet our employment needs;
- Prioritise the use of brownfield land;
- Ensure there is a diverse range of employment sites and premises; and
- Facilitate the development of high value clusters in prime sectors such as:
    - Advanced manufacturing;
    - Business, financial and professional services;
    - Creative and digital;
    - Health innovation; and
    - Logistics.

Objective 4: Maximise the potential arising from our national and international assets.

We will:

- Focus development in the Central Economic Area, Manchester Airport and key economic locations;
- Improve visitor facilities in the City Centre, Quays and Manchester Airport and our international and and national sporting assets;
- Enhance our cultural, heritage and educational assets;
- Improve sustainable transport and active travel access to these locations;
- Improve access for local people to jobs in these locations;

- Ensure infrastructure provision supports growth in these locations; and
- Increase graduates staying in Greater Manchester.

Objective 5: Reduce inequalities and improve prosperity.

We will:

- Ensure people in all our neighbourhoods have access to skills training and employment opportunities;
- Prioritise development in well-connected locations;
- Deliver an inclusive and accessible transport network;
- Strengthen the competitiveness of north Greater Manchester; and
- Reduce the number of Greater Manchester's wards in the 10% most deprived nationally.

Objective 6: Promote the sustainable movement of people, goods and information.

We will:

- Enhance our existing transport network;
- Focus new development within 800m of sustainable transport hubs;
- Ensure new development is designed to encourage and enable active and sustainable travel;
- Expand our transport network to facilitate new areas of sustainable and inclusive growth;
- Capitalise on national and regional investment in transport infrastructure;
- Improve opportunities for sustainable freight; and
- Ensure new development provides opportunities for affordable, high quality digital infrastructure.

Objective 7: Ensure that Greater Manchester is a more resilient and carbon neutral city-region.

We will:

- Promote carbon neutrality of new development by 2028;
- Promote sustainable patterns of development that minimise the need to travel and contribute to cleaner air;
- Locate and design development to reduce car dependency;
- Facilitate provision of infrastructure for cleaner vehicles; and
- Improve energy efficiency and the generation of renewable and low carbon.

Objective 8: Improve the quality of our natural environment and access to green spaces.

We will:

- Enhance the special landscapes across Greater Manchester, green Infrastructure, biodiversity and geodiversity;
- Improve access to the natural environment and green spaces including parks and playgrounds; and
- Promote the role of green space in climate resilience and reducing flood risk.

Objective 9: Ensure access to physical and social infrastructure.

We will:

- Ensure that our communities and businesses are supported by infrastructure;
- Improve the capacity and network coverage of digital, energy, telecoms, transport and water in key growth locations; and
- Ensure new development is properly served by physical and social infrastructure including schools, health, social care, sports and recreation facilities.

8. Revised Draft GMSF Spatial Options 2019

8.1. A total of six Spatial Options have been developed and considered during the preparation of the Revised Draft GMSF 2019. The assessment of the options has involved an initial overview assessment against the GMSF plan objectives (listed previously in Section 7) to understand the extent to which the options would meet the overall GMSF vision. The second stage then assessed the options against the Integrated Assessment (IA) objectives (Section 9). The GMSF Spatial Options are:

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 Option

8.2. The detail of each Spatial Option and the assessment against the plan objectives is set out in the tables below.

Option 1 – Business as usual

Summary of Spatial Option	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 industrial and warehousing 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**
Overview assessment against GMSF objectives	Housing would primarily be located in the existing urban area but there is insufficient land to meet the identified Local Housing Need. It is likely that the market will continue to favour the core growth area and the south of Greater Manchester, there will be no significant boost to northern competitiveness and it will not address inequalities between the north and south. The employment land supply is limited and would not meet the requirements of businesses which wish to locate in accessible locations, for example close to the strategic road network, and as a result companies are likely to relocate to areas outside GM. This option would also not allow the economic potential of assets to be maximised, particularly around Manchester Airport and Port Salford. This option is likely to deliver growth in unsustainable locations and contribute little to improving the natural environment or addressing climate change. In addition the option would require districts to individually meet their LHN and to consider this through individual Local Plans, this does not reflect the strategic approach to policies in the GMSF which consider the needs of Greater Manchester as a whole, not just at a district level.

Option 2 – Urban Max

<table>
<tr>
<td>Summary of Spatial Option</td>
<td>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 accordance with the density assumptions below. No Green Belt release would be required.

<table>
<tr><td>Location</td><td>Minimum net residential density (dwellings per hectare)</td></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>
</tr>
</table>

Overview assessment against GMSF objectives	This option would maximise the use of the existing urban area, significantly increasing densities to maximise housing delivery. Although the option delivers the housing numbers, the option would not deliver the range of houses to meet the housing need. In many places development will be in the form of high density apartments to meet the prescribed density levels. The option is likely to result in over development of sites and development which is not of a scale which is in keeping with the existing area, in some cases potentially causing unacceptable harm to heritage assets and conservation areas. In addition the option is largely reliant on the strength of a housing market which in many places does not currently exist. It would also not allow opportunities around existing assets to be exploited, for example areas around Manchester Airport or the M62 corridor. The urban area would also not provide the full range of employment sites needed to meet market demands in Greater Manchester. Central areas will deliver high levels of growth and urban assets such as Trafford Park could be optimised. However, these locations would not be capable of providing opportunities for logistics employment; such uses prefer to locate outside of the urban area, close to the strategic road network. As a result there is the potential for industry to be lost to competing cities and workers will need to travel greater distances to access jobs. This option would also not address the need to increase the competitiveness of north Greater Manchester. There is likely to be increased pressure to build on green spaces in the urban area which will limit access to green spaces and have a negative environmental impact. The capacity of existing infrastructure is likely to be inadequate and there could be insufficient land to provide for the new infrastructure requirements of this very dense development. However, the objective to reduce the movement of people could be partly met as a result of development being concentrated over a smaller area, reducing the need to travel to access services and employment.

Option 3 – Transit City

Summary of Spatial Option	This option uses the optimised baseline housing land supply and also includes sites outside of the existing urban area, but which are located close to a town centre or sustainable public transport hub. This option therefore requires some Green Belt release. Close to a town centre is defined as being within 800m of a main town centre boundary, or 800m of the centroid of the other town centres. An 800m buffer area has also been applied around public transport hubs including, Metrolink stops, Bus Rapid Transit stops and Railway Stations with at least 2 trains per hour. These are considered to be the most sustainable locations and development in these areas will take advantage of existing assets. **RESIDENTIAL TOTAL – 194,000 units** **INDUSTRY AND WAREHOUSING TOTAL – 2,731,000 sq.m** **OFFICE TOTAL - 2,807,000 sq.m**
Overview assessment against GMSF objectives	This option would deliver high density housing development close to town centres and public transport hubs, development is likely to be high density apartments in these locations. However, unlike Option 2 there is the potential to deliver a wider range of house types, considering the greater amount of land which would be available with this option as well as the urban/rural character of existing transport hubs across Greater Manchester. The option would result in a greater choice of employment locations and includes areas around existing Greater Manchester assets which are close to public transport hubs, such as Manchester Airport. However, the option would make a limited contribution to meeting the demand for warehousing and distribution sites located close to the motorway network, which by their nature tend to be remote from existing town centres and public transport hubs. The options focus on existing assets also means it would have a minimal contribution to redistributing growth to the north and market trends that favour the south would continue. This option prioritises development sites which are close to services and public transport hubs and therefore minimises the need to travel, thus meeting the objectives that promote the efficient movement of people. With development restricted to areas around transport hubs and town centres there is likely to be increased pressure to build on green spaces which could limit access to green spaces and have a negative environmental impact.

Option 4 – Boost northern competitiveness

Summary of Spatial Option	This option uses the optimised baseline housing land supply, sites in the north of Greater Manchester which are considered to be suitable for development and which meet the Spatial Strategy, as well as sites which are located in the south and which are considered to be suitable for development and meet the Spatial Strategy. This option includes sites which are outside of the existing urban area and therefore requires Green Belt release. The north of Greater Manchester for the purposes of this Spatial Option is defined as: Bolton, Bury, Oldham, Rochdale, Salford, Tameside and Wigan. Outside of the existing urban area this option includes sites which are located adjacent to existing areas of deprivation (IMD 10% most deprived areas) where it is considered that a site could have a regenerative impact on an area of deprivation. This option also seeks to take advantage of existing economic opportunities in the north of Greater Manchester and capitalise on these areas to deliver transformational change and contribute to the delivery of inclusive growth across Greater Manchester. **RESIDENTIAL TOTAL – 204,000 units** **INDUSTRY AND WAREHOUSING TOTAL – 5,103,000 sq.m** **OFFICE TOTAL - 2,807,000 sq.m**

Overview assessment against GMSF objectives	This option would deliver housing in the existing urban area across Greater Manchester, but would focus the release of sites currently in the Green Belt in the north of Greater Manchester only. Residential development would be focused in areas where there are existing employment uses, thereby reducing the need to travel through the co-location of housing and employment areas. Sites which are adjacent to areas of deprivation would also be prioritised to help deliver regeneration and reduce inequalities. However, this option would not deliver sufficient housing numbers in the south of Greater Manchester where site availability in the urban area is most constrained. Although the option would meet the LHN for Greater Manchester it would only include a very small buffer; this would provide limited flexibility and options in the market to deliver the housing need. The option takes advantage of existing employment sites in north Greater Manchester which have the potential to deliver transformational change. It would help to meet the needs of specific employment sectors, such as logistics. However, the option would not meet the market demand for development sites in the south of Greater Manchester and opportunities to capitalise on existing assets such as the Airport would be missed. This would lead to a constrained land supply in the south which would impact on overall growth ambitions in Greater Manchester. The targeted distribution of growth in the north would partially meet the objective to tackle inequalities; however it would not directly assist in regenerating areas of deprivation in the south of Greater Manchester. The option could provide for some improvements to infrastructure and the environment, particularly considering the large scale allocations which would have the ability to deliver significant infrastructure improvements and environment net gain.

Option 5 – Sustain southern competitiveness

Summary of Spatial Option	This option uses the optimised baseline housing land supply, sites in the south of Greater Manchester which would take advantage of existing and planned global assets as well as sites which are located in the south and which are considered to be suitable for development and meet the Spatial Strategy. This option includes sites which are outside of the existing urban area and therefore requires Green Belt release. The south of Greater Manchester for the purposes of this Spatial Option is defined as: Manchester, Stockport and Trafford. This option focuses growth on existing areas of high demand and projects forward existing market trends in Greater Manchester. The option would take advantage of existing and planned global assets, such as Port Salford, Manchester Airport and HS2 and would provide additional land in locations which have traditionally been most attractive to the market. **RESIDENTIAL TOTAL – 204,000 units** **INDUSTRY AND WAREHOUSING TOTAL – 3,062,000 sq.m** **OFFICE TOTAL – 2,953,000 sq.m**

Overview assessment against GMSF objectives	This option would deliver housing in and around the urban area across Greater Manchester, but would focus the release of sites currently in the Green Belt in the south of Greater Manchester only. Residential development would be focused around existing and planned assets, such as Manchester Airport and HS2, as well as other sustainable sites which are suitable for development and which offer a significant opportunity to deliver housing, for example the large Carrington allocation in Trafford. Although the option would meet the LHN for Greater Manchester it would only include a very small buffer; this would provide limited flexibility and options in the market to deliver the housing need. The option would allow for the expansion of key employment locations such as Port Salford and the Manchester Airport Enterprise Zone. However these areas would not be capable of meeting the identified need for employment land in Greater Manchester and there would be limited opportunities to provide suitable sites for logistics related employment land without sites in the north of Greater Manchester. By targeting new development around existing and planned assets such as the City Centre, The Quays, Airport, Manchester Ship Canal and Port Salford most of the objectives would be partially met with new levels of growth having the potential to provide new neighbourhoods, choice of housing, new employment opportunities and efficient movement patterns. However, this option would not address existing inequalities in Greater Manchester, prioritising sites in the south would project forward existing trends and would not boost northern competitiveness. The option is likely to make existing inequalities in Greater Manchester worse by constraining sites in the north and making the south the most attractive location for development. The option could provide for some improvements to infrastructure and the environment, particularly considering the large scale allocations which would be included.

Hybrid Growth Option

The Hybrid Growth Option comprises a combination of three of the proposed spatial options, Option 3, Option 4 and Option 5. The hybrid approach was developed as none of the individual options were themselves considered suitable to fully deliver the objectives of the GMSF.

Summary of Spatial Option	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). 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 – 218,549 units** **INDUSTRY AND WAREHOUSING TOTAL – 4,220,000 sq.m** **OFFICE TOTAL - 2,460,000 sq.m**

Overview assessment against GMSF objectives	This option would deliver housing in and around the urban area across Greater Manchester. It would also deliver housing development close to town centres and public transport hubs, development is likely to be high density apartments in these locations. Residential development would also be focused in areas where there are existing employment uses, thereby reducing the need to travel through the co-location of housing and employment areas. New transport infrastructure would also be delivered to ensure large allocations provide sustainable development which is well connected. The location of housing would also seek to tackle inequalities through the development of sites which are adjacent to areas of deprivation. There will be the potential to deliver a wide range of house types considering the diverse range of sites proposed across Greater Manchester. Under this option the need for employment land would be met across Greater Manchester, it would provide a broad range of sites across all districts. The option takes advantage of existing employment sites in north Greater Manchester which have the potential to deliver transformational change, also helping to meet the needs of specific employment sectors, such as logistics. It would also capitalise on existing assets such as Port Salford, HS2 and the Manchester Airport Enterprise Zone. The release of some very large sites could create new communities with the volume of development having the viability to improve environments and provide new infrastructure. This could provide sustainable movement and places that can benefit existing communities and meet the objective to promote truly inclusive growth. This option would strengthen the competitiveness of the north whilst balancing this with continued growth in the south of Greater Manchester. This approach will help to reduce inequalities and provide a wide range of housing and employment sites to meet the needs and aspirations for growth.

9. Integrated Assessment of the Spatial Options

9.1. Each Spatial Option has been assessed against the IA objectives. These are listed in Table 2.

Table 2: IA framework

Ref	Objective	Assessment criteria….will the GMSF
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?
		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	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	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	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	Foster good relations between different people?
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?

Ref	Objective	Assessment criteria….will the GMSF
		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	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 appropriate social infrastructure	Ensure people are adequately served by key healthcare facilities, regardless of socio-economic status?
		Ensure sufficient access to educational facilities for all children?
		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	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	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	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	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?

Ref	Objective	Assessment criteria….will the GMSF
		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	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	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	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?
15	Increase energy efficiency, encourage low-carbon generation and reduce greenhouse gas emissions	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	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	Support the development of previously developed land and other sustainable locations?
		Protect the best and most versatile agricultural land / soil resources from inappropriate development?

Ref	Objective	Assessment criteria….will the GMSF
	GM, whilst reducing land contamination	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	Support the sustainable use of physical resources?
		Promote movement up the waste hierarchy?
		Promote reduced waste generation rates?

9.2. A series of assessment matrices, along with a description of the effect for each Spatial Option are at Appendix 1. The notation in the assessment matrices is as per Table 3.

Table 3: IA scoring matrices

++	Very positive effect
+	Positive effect
?	Uncertain
-	Negative effect
--	Very negative effect
o	Neutral / no effect

9.3. Combined symbols are sometimes used in the assessment (e.g. '+/ ?' or '- / ?'). Where this occurs, it is because there is a strong likelihood of positive/negative effects but that there is insufficient information to achieve certainty at this stage. Alternatively, there may be a combination of positive or negative effects, depending on how the option under consideration is eventually delivered.

9.4. Effects are categorised as being likely to occur in the short term (0-4 years); medium term (5-9 years) or long term (10+ years). The assessment also seeks to categorise if the effects are direct, indirect, temporary and/or permanent. The likely spatial extent is also set out, along with a list of likely receptors or affected groups.

9.5. This section contains a summary of the assessment of the Spatial Options against the IA framework. The full assessment matrices are in Appendix 1.

Option 1 – Business as usual

9.6 Option 1 performs poorly against the objective to provide a sustainable supply of housing and employment land because it would not provide the required number of homes to meet the local housing need and locations to meet the demand for employment floorspace, particularly for industrial and warehousing premises.

9.10 Over time, the option could also lead to stresses in the transport and utilities networks as improvements to the networks are likely to be implemented in a piecemeal fashion rather than in line with a strategic overview.

9.11 There is likely to be an overall neutral impact on the objective to reduce deprivation and disparity as jobs, investment and housing is provided to some areas of Greater Manchester in line with the existing pattern of spatial development. However, the option is likely to miss the opportunity to redistribute wealth and investment to the areas in Greater Manchester that need it the most by taking a more strategic approach.

9.12 Whether this option would have an impact on promoting equal opportunities and eliminating discrimination is unknown as it is difficult to conclusively predict how the spatial pattern of development might affect relationships between people and non-discriminatory access to facilities and infrastructure.

9.13 Over the long term this option will increase the housing stock which, if delivered to a high standard, has the potential to reduce the number of people living in poor housing which can lead to poor health. As gaps in the urban area become filled with new housing and businesses urban area might be put under strain from development.

9.14 It is likely that new social and education infrastructure facilities will be provided to meet the level of growth planned for under this option. However, there is a risk that new land for new facilities might be hard to find in and around the urban which could lead to more pressure in existing facilities.

9.15 Promoting sustainable modes of transport by reducing the need to travel and promoting the use of public transport provision is an established plan making principle and is likely to feature under Option 1.

9.16 This option is likely to have a neutral impact on improving air quality as new trips will be made by both private motor vehicles and public and active transport modes.

9.17 It is unknown as to whether Option 1 would have an impact on conserving and enhancing biodiversity, green infrastructure and geodiversity. The reasons are that there could be potentially both positive and negatives. For example:

- it is assumed that new development will be brought forward in accordance with best practice, the planning system and legislation on the protection of designated sites, habitats and species;
- There might be negative effects on non-designated sites, such as wildlife corridors
- Urban greenspace might be put under pressure from development in the urban area; and

- The majority of Greater Manchester's designated sites that are outside of the urban area are likely to remain unaffected by development and will continue to be protected.

9.18 Option 1's effect on climate change adaption and resilience is largely unknown as new development in the urban area presents potential positive and negative impacts to tackle the urban heat island affect.

9.19 In terms of impact on flood risk, also an effect of climate change, and water resources; all development is expected to follow best practice, the planning system and legislation. Consequently a neutral impact is expected.

9.20 The impact on the objective to increase energy efficiency, low carbon generation and reducing greenhouse gas emissions is likely to be largely neutral as the building and occupation of new homes and businesses will require energy , yet the development of new low carbon and renewable energy generation technology should help reduce energy use or use it from renewable sources.

9.21 The impact of Option 1 on landscape, townscape and heritage assets is likely to be neutral in the short and medium time periods and then potentially negative or unknown in the long term. The reasons are that development will be dispersed around Greater Manchester with various effects on character, depending on the type and scale of development and the sensitivity its location.

9.22 Option 1 is likely to have a positive impact on supporting the use of previously developed land and other sustainable locations and protecting the best and most versatile land as development on Green Belt is not part of this option.

9.23 The impact on the sustainable consumption of resources and implementing the waste hierarchy is largely negative or unknown as waste will be produced from the construction and occupation of homes and businesses, but measures could be put in place to implement the waste hierarchy.

Option 2 – Urban Max

9.24 Option 2 would meet the local housing need figure but would not deliver the right types and size of homes as it would be skewed towards high density apartment development. It would also not meet employment land needs as the range of sites needed are unlikely to be provided.

9.25 In the short to medium term, increasing housing densities around transport nodes and in town centres is likely to enable more people to access sustainable transport options. But in the long term, the capacity of the transport network within the urban area might be put under strain with limited opportunities to improve it.

9.26 There is likely to be an overall neutral impact and some positive and negative impacts on the objective to reduce deprivation and disparity. Jobs, investment and housing would be provided in some areas of Greater Manchester in line with the existing pattern of spatial

development, but to a higher density. However, the option is likely to miss the opportunity to redistribute wealth and investment to the areas in Greater Manchester that need it the most

9.27 Under the objective to promote equal opportunities and eliminate discrimination this option likely to have a positive impact on equal access to infrastructure as more people in the urban area will have access to facilities and infrastructure.

9.28 Over the long term this option will increase the housing stock which, if delivered to a high standard, has the potential to reduce the number of people living in poor housing which can lead to poor health. However, urban greenspace will be under pressure for new housing and employment development leading to a reduction of urban greenspace and the health benefits from it, which is a negative.

9.29 In terms of the provision of social and education infrastructure facilities there is a risk that new land for new facilities might be hard to find within the confines of the urban area as it will be under pressure for new housing and employment development, consequently there is a question over whether social and education infrastructure needs could be met.

9.30 This option is likely to have a positive impact on the objective to promote sustainable modes of transport by reducing the need to travel and promoting the use of public transport provision. The reasons are that people are likely to live close to transport links and employment opportunities in the urban area.

9.31 This option is likely to have an unknown impact on improving air quality as potentially there could be positives and negative consequences: more people will have access to sustainable transport options which is good, but if more people use private vehicles to travel, there is a risk of road congestion and idling vehicles creating air pollution hotspots from exhaust fumes.

9.32 There could be neutral, unknown and potentially negative impacts on conserving and enhancing biodiversity, green infrastructure and geodiversity because:

- it is assumed that new development will be brought forward in accordance with best practice, the planning system and legislation on the protection of designated sites, habitats and species;
- There might be negative effects on non-designated sites, such as wildlife corridors
- Urban greenspace might be put under pressure from a lot development in the urban area; and
- The majority of Greater Manchester's designated sites that are outside of the urban area are likely to remain unaffected by development and will continue to be protected.

9.33 Maximising development in the urban area could, if not mitigated, potentially lead to negative consequences on climate change adaption and resilience as the urban heat island effect is increased from higher density development and loss of urban greenspace.

9.44 In terms of impact on flood risk, also an effect of climate change, and water resources; all development is expected to follow best practice, the planning system and legislation. Consequently a largely neutral impact is expected. However, there could be some negative impacts if land that is at risk of flooding is put under pressure for development, but some positives if brownfield sites are redeveloped with better drainage arrangements.

9.45 The impact on the objective to increase energy efficiency, low carbon generation and reducing greenhouse gas emissions is likely to be neutral and positive as the building and occupation of new homes and businesses will require energy, yet the development of new low carbon and renewable energy generation technology should help reduce energy use or use it from renewable sources, plus sustainable transport use will reduce energy demand.

9.46 The impact of Option 2 on landscape, townscape and heritage assets is likely to be unknown with some potential negative effects in the long term. The reasons are that development will be dispersed around the urban area of Greater Manchester with various effects on character, depending on the type and scale of development and the sensitivity its location. However, increased densities could change local character, views, historic assets and townscapes.

9.47 Option 2 is likely to have very positive impact on supporting the use of previously developed land and other sustainable locations and protecting the best and most versatile land as development on Green Belt is not part of this option and brownfield sites are developed.

9.48 The impact on the sustainable consumption of resources and implementing the waste hierarchy is largely negative or unknown as waste will be produced from the construction and occupation of homes and businesses, but measures could be put in place to implement the waste hierarchy.

Option 3 – Transit City

9.49 Although this option could provide a wider range of house types as it includes a range of sustainable locations, it would not provide the number of homes required to meet local housing needs.

9.50 This option would not meet the full employment land needs as significant employment opportunities for logistics and advanced manufacturing lie along the motorway network beyond town centres and existing public transport hubs, but which are not part of this option.

9.51 Under this option new housing and businesses would be situated close to transport hubs or within easy reach of them which is a positive impact. Nevertheless there is a potential risk that without appropriate investment, the transport area in and around the urban area might not have sufficient capacity to meet demand.

9.52 New homes and businesses would be situated close to existing utility and digital infrastructure but there is a need to ensure that it can accommodate the demands of new development over the long term.

9.53 There would be positive and negative impacts on the objective to reduce levels of deprivation. The option would direct new housing, investment and jobs to the urban area, town centres and around sustainable transport hubs which will benefit deprived communities in these locations. However this options would not specifically target reducing widespread deprivation in northern Manchester which is an objective of the plan.

9.54 Under the objective to promote equal opportunities and eliminate discrimination this option likely to have a positive impact on equal access to infrastructure as more people in the urban area and around sustainable transport hubs will have access to facilities and infrastructure.

9.55 In terms of supporting improved health and wellbeing of the population, there are largely positives with this option as health facilities would be located in the most sustainable locations and new housing built to good design standards will reduce the number of people living in poor housing conditions that impact on health. A potential negative of this options is that by directing development to the urban area, town centres and sustainable locations, may put pressure on existing greenspaces for development that could provide health and wellbeing opportunities.

9.56 In terms of the provision of social and education infrastructure facilities local authorities will receive contributions from development sites which will help to fund social and education facilities. However, there is a potential risk that over time existing facilities could be put under pressure from the level of demand in the urban area and there might be limited opportunities to create new facilities of new land in Green Belt.

9.57 The spatial pattern of development under this option seeks to maximise the sustainable transport options for residents of Greater Manchester, which is a very positive impact. There is a need to ensure that in the long term, sustainable transport investment can keep pace with the level of demand.

9.58 Considering the objective to improve air quality, this option seeks to reduce the need to travel and maximise sustainable patterns of transport as alternatives to using private vehicles. Less use of petrol and diesel vehicles will improve air quality. The positives impacts are likely to be gradual as people adapt to new patterns of travelling.

9.59 There could be neutral, positive, unknown and potential some negative impacts on conserving and enhancing biodiversity, green infrastructure and geodiversity because:

- it is assumed that new development will be brought forward in accordance with best practice, the planning system and legislation on the protection of designated sites, habitats and species;
- There might be negative effects on non-designated sites, such as wildlife corridors
- Urban greenspace might be put under pressure from development in the urban area; and
- The majority of Greater Manchester’s designated sites that are outside of the urban area are likely to remain unaffected by development and will continue to be protected.

9.60 In terms climate change, the main risks are flooding and the urban heat island effect. Under this option there would be some high density development that could contribute this effect and put development pressure on cooling greenspaces. Drainage infrastructure could also be under pressure, which if not invested in, could lead to more sewer flooding events. However, if development is designed in line with best practice, greenspace provided and drainage invested in, the impacts of climate change could be mitigated.

9.61 In terms of impact on flood risk, also an effect of climate change, and water resources; all development is expected to follow best practice, the planning system and legislation. Consequently a largely neutral impact is expected. However, there could be some negative impacts if land that is at risk of flooding is put under pressure for development, but some positives if brownfield sites are redeveloped with better drainage arrangements.

9.62 The impact on the objective to increase energy efficiency, low carbon generation and reducing greenhouse gas emissions is likely to be neutral and positive as the building and occupation of new homes and businesses will require energy, yet the development of new low carbon and renewable energy generation technology should help reduce energy use or use it from renewable sources, plus sustainable transport use will reduce energy demand.

9.63 The impact of Option 3 on landscape, townscape and heritage assets is likely to be unknown with some potential negative effects in the long term, if not mitigated. The reasons are that development will be located around the urban area of Greater Manchester and with some Green Belt release that has not been built on before. Therefore there could be various effects on character, depending on the type and scale of development and the sensitivity its location. In the urban area, increased densities could change local character, views, historic assets and townscapes.

9.64 In terms land resources, this option strongly supports the redevelopment of previously developed land and sustainable locations which is positive. Some Green Belt land would be required to be developed for this option which would need further investigation to determine if the best and most versatile agricultural land would be at risk. The option supports reductions in land contamination through the reuse and remediation of previously developed land which is a positive impact.

9.65 The impact on the sustainable consumption of resources and implementing the waste hierarchy is largely negative or unknown as waste will be produced from the construction and occupation of homes and businesses, but measures could be put in place to implement the waste hierarchy.

Option 4 – Boost northern competitiveness

9.66 This option performs positively against the objective to provide a sustainable supply of housing because it would meet the local housing need, however only with a minimal buffer, but would provide a range of house types and affordable housing.

9.67 Although this option is likely to meet employment land needs in the north of Greater Manchester, it would not provide for full needs in the south as there is a limited supply of

employment land opportunities there without using Green Belt, as such there would be an overall negative impact.

9.68 In terms of transport and utilities capacity to accommodate growth, there are neutral, positive and some unknown impacts as development which is concentrated in the existing urban area will link well to the existing transport network, leading to a greater use of public transport, and existing infrastructure. But there is a need to ensure that new allocation for housing and employment development outside of the urban area and on Green Belt are adequately served by transport and infrastructure.

9.69 This option would create some positive impacts on reducing deprivation and poverty, especially in the north and in the urban area, by providing jobs and new homes to the people that need them the most.

9.70 Under the objective to promote equal opportunities and eliminate discrimination, this option is likely to have a positive impact on equal access to infrastructure as more people in the urban area and around sustainable transport hubs will have access to facilities and infrastructure. In terms of fostering good relations, discrimination and the needs of different areas this option is likely to have neutral impacts.

9.71 Over time, this option has some positive impacts on improving health and wellbeing because the option seeks to reduce poverty and deprivation in the north which can improve health. Also new greenspaces can be built as part of allocations on Green Belt in the north which can improve mental and physical wellbeing.

9.72 In terms of the provision of social and education infrastructure facilities, local authorities will receive contributions from development sites which will help to fund social and education infrastructure. There is the potential to create new social and education infrastructure on Green Belt, if required, and boosting investment in the north is a positive as deprived areas in the north have had limited investment in the past.

9.73 The availability of potential large sites in the Green Belt could allow the co-location of employment and housing.

9.74 Considering the objective to promote sustainable modes of transport, this option has the potential to create positive and some unknown impacts because there is an opportunity to create new sustainable transport connections on new land in Green Belt or extend existing infrastructure. Yet new allocations are also likely to stimulate more trips, some of which might include by private car. Residents in the urban areas can use existing sustainable transport options, but which will need continued investment in order to cater for growth.

9.75 This option might have a negative impact on air quality in the long term because new road freight movements associated with the logistics businesses on and adjacent to the motorway network in the north may increase air pollution.

9.76 There could be neutral, positive, unknown and potential some negative impacts on conserving and enhancing biodiversity, green infrastructure and geodiversity because:

- it is assumed that new development will be brought forward in accordance with best practice, the planning system and legislation on the protection of designated sites, habitats and species;
- There might be negative effects on non-designated sites, such as wildlife corridors
- Urban greenspace might be put under pressure from development in the urban area;
- New development in Green Belt might impact on designated sites, depending on their location; yet
- Large sites in Green Belt might present the best opportunities to create net gains in biodiversity.

9.77 In terms climate change, the main risks are flooding and the urban heat island effect. Under this option development within the urban areas could contribute to this effect and put development pressure on cooling greenspaces. Drainage infrastructure could also be under pressure, which if not invested in, could lead to more sewer flooding events. However, if development is designed in line with best practice, greenspace provided and drainage invested in, the impacts of climate change could be mitigated. Development on greenfield land could also have negative impacts, but also present opportunities to mitigate the effects climate change through flood storage, sustainable drainage systems and the creation of greenspace.

9.78 In terms of impact on flood risk, also an effect of climate change, and water resources; all development is expected to follow best practice, the planning system and legislation. Consequently a largely neutral impact is expected. However, there could be some negative impacts if land that is at risk of flooding is put under pressure for development, but some positives if brownfield sites are redeveloped with better drainage arrangements. There could also be positives if flood storage and sustainable drainage is implemented on new development on greenfield land or Green Belt.

9.79 The impacts on the objective to increase energy efficiency, low carbon generation and reducing greenhouse gas emissions is likely to be neutral with some potentially negative or unknown impacts in the long term as the building and occupation of new homes and businesses will require energy, yet the development of new low carbon and renewable energy generation technology should help reduce energy use or use it from renewable sources. Also sustainable transport for commuting use will reduce energy demand, but freight from logistic and advanced manufacturing development in the north might increase energy demand.

9.80 The impact of Option 4 on landscape, townscape and heritage assets is likely to be unknown with some potential negative effects in the long term, if not mitigated. The reasons are that development will be located around and beyond the urban area of Greater Manchester that has not been built on before. Therefore there could be various effects on character, depending on the type and scale of development and the sensitivity its location. In the urban area, increased densities could change local character, views, historic assets and townscapes.

9.81 In terms land resources, this option supports the redevelopment of previously developed land and sustainable locations which is positive. But some Green Belt land would be required to be developed for this option to meet development needs which would also need further investigation to determine if the best and most versatile agricultural land would be at risk. The option supports reductions in land contamination through the reuse and remediation of previously developed land which is a positive impact.

9.82 The impact on the sustainable consumption of resources and implementing the waste hierarchy is largely negative or unknown as waste will be produced from the construction and occupation of homes and businesses, but measures could be put in place to implement the waste hierarchy.

Option 5 - Sustain southern competitiveness

9.83 This option would meet the local housing need figure which is a positive impact, it would have a small buffer. However whilst an increase in affordable housing would be provided, it is unknown or questionable whether the full affordable housing needs in the north of Greater Manchester would be provided.

9.84 Although key assets in the urban area and the south of Greater Manchester will be capitalised on, this option would not deliver important employment sites in the north for logistics development, which is a key sector for Greater Manchester.

9.85 There would be neutral, positive and some unknown impacts on the objective to ensure that transport and utilities infrastructure can keep pace with development. The reasons are that development in the urban areas will link well with existing infrastructure, new allocations in the south would need to provide new infrastructure to service development, yet with less investment in the north under this option, there is a question as to whether infrastructure needs could be met there.

9.86 In terms of reducing levels of deprivation and disparity, under this option investment, jobs and housing would be created in the urban area and in the south, which is a positive. However, deprivation in the north, where it is most needed to be addressed, would be less effectively tackled which is a negative impact.

9.87 This option would have a neutral and unknown impacts on equality and discrimination issues as it is difficult to predict how the spatial pattern of development may affect people's behaviour towards others conclusively at this strategic level.

9.88 This option's impact on access to and provision of social and education infrastructure is mixture of neutral, positive and unknowns. The reasons are that new facilities would be provided in the urban area and in the south as a result of directing development and investment to these locations. However, investment in the north's social and educational infrastructure might be unknown, as the north is not specifically targeted under this option.

9.89 Considering the objective to promote sustainable modes of transport there are likely to be positive and unknown impacts under this option as directing development to the urban area will enable residents to take advantage of existing sustainable transport connections and

new ones created from new allocations in the south. However it would need changes to people's behaviour and the north of Greater Manchester might lose out on sustainable transport investment.

9.90 In terms of air quality, the impacts are likely to unknown with some potential negatives as it is assumed that development of sites under this option would generate more private car trips. However, the objectives of the plan seek to maximise the use of existing public transport networks which should help to reduce air quality impacts from private vehicles.

9.91 There could be neutral, positive, unknown and potential some negative impacts on conserving and enhancing biodiversity, green infrastructure and geodiversity because:

- it is assumed that new development will be brought forward in accordance with best practice, the planning system and legislation on the protection of designated sites, habitats and species;
- There might be negative effects on non-designated sites, such as wildlife corridors
- Urban greenspace might be put under pressure from development in the urban area;
- New development in Green Belt might impact on designated sites, depending on their location; yet
- Large sites in Green Belt might present the best opportunities to create net gains in biodiversity.

9.92 In terms climate change, the main risks are flooding and the urban heat island effect. Under this option development within the urban areas could contribute to this effect and put development pressure on cooling greenspaces. Drainage infrastructure could also be under pressure, which if not invested in, could lead to more sewer flooding events. However, if development is designed in line with best practice, greenspace provided and drainage invested in, the impacts of climate change could be mitigated. Development on greenfield land could also have negative impacts, but also present opportunities to mitigate the effects climate change through flood storage, sustainable drainage systems and the creation of greenspace.

9.93 In terms of impact on flood risk, also an effect of climate change, and water resources; all development is expected to follow best practice, the planning system and legislation. Consequently a largely neutral impact is expected. However, there could be some negative impacts if land that is at risk of flooding is put under pressure for development, but some positives if brownfield sites are redeveloped with better drainage arrangements. There could also be positives if flood storage and sustainable drainage is implemented on new development on greenfield land or Green Belt.

9.94 The impacts on the objective to increase energy efficiency, low carbon generation and reducing greenhouse gas emissions is likely to be neutral with some potentially negative or unknown impacts in the long term as the building and occupation of new homes and businesses will require energy, yet the development of new low carbon and renewable energy generation technology should help reduce energy use or use it from renewable sources. Also sustainable transport for commuting will reduce energy demand.

9.95 The impact of Option 5 on landscape, townscape and heritage assets is likely to be unknown with some potential negative effects in the long term, if not mitigated. The reasons are that development will be located around and beyond the urban area of Greater Manchester that has not been built on before. Therefore there could be various effects on character, depending on the type and scale of development and the sensitivity its location. In the urban area, increased densities could change local character, views, historic assets and townscapes.

9.96 In terms land resources, this option supports the redevelopment of previously developed land and sustainable locations which is positive. But some Green Belt land would be required to be developed for this option to meet development needs which would also need further investigation to determine if the best and most versatile agricultural land would be at risk. The option supports reductions in land contamination through the reuse and remediation of previously developed land which is a positive impact.

9.97 The impact on the sustainable consumption of resources and implementing the waste hierarchy is largely negative or unknown as waste will be produced from the construction and occupation of homes and businesses, but measures could be put in place to implement the waste hierarchy.

Option 6 – Hybrid Growth Option

9.98 This option would perform very positively against the objective to ensure that there is a sustainable supply of housing as it would meet local housing needs across Greater Manchester, with a sufficient buffer, and has the greatest potential to deliver a mix of types and tenures of housing.

9.99 The option would also perform very positively against the objective to ensure that there is a sustainable supply of employment land as the option proposes a range of locations to meet the needs of different business sectors.

9.100 In terms of transport infrastructure, under this option new development would be situated close to sustainable transport connections which is a positive impact. There would be a need to ensure that development allocations beyond the urban area can be served by sustainable transport connections or investment for new connections. In terms of utility and digital infrastructure, there is a need to ensure that if can accommodate the level of growth planned.

9.101 This option would have a positive impact on the objective to reduce deprivation and disparity because deprivation in a variety of locations in Greater Manchester would be tackled through new jobs, housing and investment.

9.102 This option is unlikely to have a significant impact or the impacts are unknown on the objective to promote equality of opportunity and the elimination of discrimination. However, the emphasis on building around sustainable transport under this option is likely to have a positive impact on connecting people with facilities and infrastructure.

9.103 Positive and some unknown impacts would be created on the health and wellbeing of the population as:

- 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 healthy lifestyle infrastructure;
- An increase in housing would reduce the number of people living in poor housing conditions which can have a positive impact on health; and
- Greenspaces can be capitalised on, or new ones created.

9.104 In terms of the provision of social and educational infrastructure there are positive and some unknown impacts because development will help finance new and existing facilities, areas that might have historically not had much investment previously might experience more investment in the future. However there is a potential risk that, over time, existing facilities could be put under pressure from the level of demand. But there may be opportunities to create new facilities on land in Green Belt.

9.105 This option would perform very positively against the objective to promote sustainable modes of transport because it includes taking advantage of the most sustainable locations in Greater Manchester. However, there is a need to ensure that new allocations in Green Belt are accessible by public transport and designed to promote active and healthy lifestyles.

9.106 The impacts on the objective to improve air quality are likely to be largely negative or unknown as 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. But it is likely to be a gradual change as people learn to adapt to new ways of travelling. Also this option 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.

9.107 There could be positive and unknown impacts on conserving and enhancing biodiversity, green infrastructure and geodiversity because:

- it is assumed that new development will be brought forward in accordance with best practice, the planning system and legislation on the protection of designated sites, habitats and species;
- There might be negative effects on non-designated sites, such as wildlife corridors
- Urban greenspace might be put under pressure from development in the urban area;
- New development in Green Belt might impact on designated sites, depending on their location; yet
- Large sites in Green Belt might present the best opportunities to create net gains in biodiversity.

9.108 In terms of climate change, there are likely to be some positive and negative impacts. The main climate change risks to Greater Manchester 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 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.

9.109 Consider the objective to reduce the risks of flooding there would be mostly neutral effects with potentially some positive impacts in the long term as:

- If new development is designed to best practice, planning policy guidance and legislation on reducing flooding risk, there is likely to be no impact;
- 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; and
- 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.

9.110 In terms of water resources 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.

9.111 The impacts on the objective to increase energy efficiency, low carbon generation and reducing greenhouse gas emissions is likely to be positive and unknown because the population and economic activity in Greater Manchester 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.

9.112 The impact of Option 5 on landscape, townscape and heritage assets is likely to be unknown with some potential negative effects in the long term, if not mitigated. The reasons are that development will be located around and beyond the urban area of Greater Manchester that has not been built on before. Therefore there could be various effects on character, depending on the type and scale of development and the sensitivity its location. In the urban area, increased densities could change local character, views, historic assets and townscapes.

9.113 In terms land resources, this option supports the redevelopment of previously developed land and sustainable locations which is positive. But some Green Belt land would be required to be developed for this option to meet development needs which would also need further investigation to determine if the best and most versatile agricultural land would be at risk. The option supports reductions in land contamination through the reuse and remediation of previously developed land which is a positive impact.

9.114 The impact on the sustainable consumption of resources and implementing the waste hierarchy is largely negative or unknown as waste will be produced from the construction and occupation of homes and businesses, but measures could be put in place to implement the waste hierarchy.

10. Summary and next steps

10.1. The assessment of the Spatial Options against the IA objectives shows that each option has some positive elements for Greater Manchester.

10.2. Where potential negative effects have been highlighted, there exists an opportunity for the GMSF to address those particular issues through development of policy which shapes and influences sustainable development.

10.3. Option 1 is a 'business as usual' scenario and it would not meet the LHN or employment land need. Option 2 achieves the LHN through significant increases in the density of development in the urban area, which is likely to increase pressure on existing infrastructure as well as lead to increased pressure on green spaces. Neither Option 1 nor Option 2 proposes any Green Belt release to meet the development needs. Option 3 'Transit City' seeks to maximise development in the most sustainable locations around existing transport hubs and town centres across Greater Manchester. This option, although including Green Belt release, would not meet the LHN. Option 4 and Option 5 focus development in a specific area of Greater Manchester, the northern districts in Option 4 and the southern districts in Option 5. Whilst both options would meet the need with marginal buffers, they would lead to an uneven distribution of growth across the city region, with both options disadvantaging certain areas of Greater Manchester.

10.4. Option 6, the Hybrid Option, incorporates elements of several of the Spatial Options drawing out specific elements which when combined meet the overarching GMSF vision, Spatial Strategy and strategic objectives. Key elements of the Hybrid Option include:

- Optimising the baseline housing land supply, to ensure all opportunities to increase densities and identify additional sites have been explored;
- Concentrating development near to town centres and/or sustainable public transport hubs;
- Taking advantage of existing and planned global assets; and
- Delivering inclusive growth across Greater Manchester, seeking opportunities to boost the competitiveness of north Greater Manchester.

10.5. The next steps will be to develop policies and site allocations which are in accordance with the Hybrid Growth Option. The appraisal of these policies will form part of the IA of the Revised Draft GMSF 2019.

Appendix – Integrated Assessment of Revised Draft GMSF 2019 Spatial Options

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 districts 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	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	Could have cumulative socio-economic and environmental effects with other local development schemes.	Consult with individual districts on where the shortfall might be accommodated

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
	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	GM		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 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.		GMSF policy should seek to maximise education and skills potential. Strategic mapping of existing and future employment requirements (in 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 publically 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 on line 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	Reduce the proportion of people living	o	o	o	n/a	n/a	n/a	Receptors: none identified	Under option 1 there will continue to be development which will bring about job creation in construction, and within the	Link to other initiatives or investments (e.g. apprenticeships, health	Direct impact will be through job creation and overall housing stock improvement.

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
	deprivation and disparity	in deprivation?							Affected groups: those identified as living in deprivation	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 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.	initiatives, education and/or skills programmes)	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.
		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	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	?	?	?	I	P	Local				Specify that higher density development is more readily

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)							
		and equal access to facilities / infrastructure for all?								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. 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.		accessible to facilities and infrastructure
		Ensure no discrimination based on 'protected characteristics', as defined in the Equality Act 2010?	n/a	n/a	n/a	n/a	n/a	n/a				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 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.

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
		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 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 there 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	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	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

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)							
		their background?								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.		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 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 <u>major transport hubs</u>).
		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.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
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. 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.	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 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,	?	?	?	D	P	Local				None identified

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
		amenity and tranquillity?										
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	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.		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 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

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 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 flood risk including from climate change?	o	o	o	D	P	Local				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	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	Encourage reduction in energy use and increased	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,	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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	and reduce greenhouse gas emissions	energy efficiency?								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.		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.
		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 signficant 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	o	o	- / ?	D	P	Local/GM				None identified

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		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	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 inappropriate development?	+	+	+	D	P	Local / GM				Draft policy which ensures development of BAMV agricultural land is not promoted
		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	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	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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	waste hierarchy									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.		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

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 districts 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 (eg 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 sustainable economic	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 development needs accessible locations, close to the strategic	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.
		Support education	o	o	o	I	P	GM				GMSF should link to wider GMCA skills programmes.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	growth and job creation	and training to provide a suitable labour force for future growth?								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.		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 spatial distribution of	?	?	?	D	P	GM				Ensure infrastructure partners are consulted on development proposals

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		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 Multiple Deprivation?	o	o	o	I	P	Local / GM				As above.

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
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 <u>new/future communities</u>.
		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 (eg 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 wellbeing of the population and reduce health inequalities	Support healthier lifestyles and support improvements in determinants of health?	+	+	+	I	P	GM	Receptors: built environment, air quality Affected groups: various	Development of housing under Option 2 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	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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										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.		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 and sports facilities?	o	? / -	? / -	D	P	Local				Ensure playgrounds etc are a policy requirement and located in accessible locations.
8	Support improved educational attainment and skill levels for all	Improve education levels of children in the area, regardless of	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	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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		their background?								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.		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 include freight as part of employment land.	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.
		Support the use of sustainable and active modes of transport?	+	+	+	D	P	Local / GM				As above.

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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 new multifunctional green infrastructure.	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.
		Support and enhance existing multifunctional green infrastructure and / or contribute towards the creation of new	?	?	? / -	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

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		multifunctional green infrastructure?										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 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	Restrict the development of property in	?	? / -	? / -	D	P	Local	Receptors: flood risk areas Affected groups:	This option will not necessarily result in new measures to manage existing/future flood risk	Increased risk of flooding	Policy should reinforce existing guidance and best practice. Policy should link to other agendas, such as those

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	people and property	areas of flood risk?							residents in or near to flood risk areas	(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 whjich will help to ensure development is appropriately future proofed.		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 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.	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 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	o	o	o	D	P	Wider				Policy should encourage design in new developments which encourages sustainable water use. This

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)							
		water resources than are available to maintain a healthy environment?										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 emitted across GM?	+	+	+	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?	?	?	?	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	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

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
										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.		(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 development?	+	+	+	D	P	Local / GM				Draft policy which ensures development of BAMV agricultural land is not promoted
		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 contaminatio	+	+	+	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)							
		n through the remediation and reuse of previously developed land?										
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.

Spatial Option 3 – Transit City

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,	Ensure an appropriate quantity of housing land to meet the objectively assessed need for market and	-	-	--	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	This Option would not meet the LHN across GM in terms of the number of dwellings required. Although this option has the potential to deliver a range of housing types since it includes a range of type of sustainably accessible locations, it still would not meet LHN which would be felt	Could have cumulative socio-economic and environmental effects with other local development schemes.	None identified as this Option would not meet LHN.

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
	tenures in locations to meet housing need, and to support economic growth	affordable housing?							likely to affect those already living in deprivation and with disabilities	towards middle and end of the plan period. There is uncertainty about affordable housing as this will be dealt with through individual district Local Plans, with a local policy based on each districts need. 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 and around the urban area. However, as this options does not include employment sites adjacent to the motorway network, which some employment sectors such as logistics and advanced manufacturing prefer, residents may need to travel further for some employment opportunities. The spatial location of housing is unlikely to have significant impacts on energy efficient and resilience of housing stock.		
		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				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				None identified
		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 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	Some of the significant employment opportunities for the logistics and advanced manufacturing employment sectors lie along the motorway network and beyond town centre or existing transport hubs. Therefore this option would not meet the full demand for employment land across GM. 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 the	Could have cumulative socio-economic and environmental effects with other local development schemes.	Brownfield land remediation grant scheme would be required to ensure a sustainable supply of employment land.
		Support education and training to provide a suitable labour force for future growth?	o	o	o	I	P	GM				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	+/-	+/-	+/-	D	P	Local / GM				The GMSF should encourage a strategic approach to transport connectivity and ensure that employment locations take account of

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)							
		are well-connected and well-served by infrastructure?								urban area, close to town centres and sustainable transport hubs and so would be well served by existing transport infrastructure. However, not all of GM's employment needs could be met by this option.		current and future 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 the long term, without appropriate investment, there is the potential risk that the transport network in and around the urban area might not have sufficient capacity to deal with the level of demand. 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	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 Ensure long term investment in the transport network and promote through policy sustainable transport options.
		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?	+/-	+/-	+/-	I	P	Local / GM	Receptors: GM population Affected groups: those identified as living in deprivation	This Option would direct new housing, investment and jobs to the urban area, town centres and close to sustainable transport hubs which will benefit deprived communities in these locations. However, this option would not specifically target reducing widespread deprivation in northern Manchester, which is an objective of the plan.	Link to other initiatives or investments (e.g. apprenticeships, health initiatives, education and/or skills programmes)	None identified as a policy to target reducing deprivation in the north of GM would be outside this option.
		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				As above.

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
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	This spatial option is unlikely to have a significant impact or the impacts are unknown on this objective. However, the emphasis on building around sustainable transport locations 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	I	P	Local				No direct discrimination has been identified. However, accessibility should be considered when new SI is delivered (eg for disabled and elderly people).
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	?	?	?	D	P	P				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	Support healthier lifestyles and support	+	+	+	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.	Improved health and reduced health inequalities through positive planning and the promotion of green spaces.	None identified

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	the population and reduce health inequalities	improvements in determinants of health?								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. By directing development to the urban area, town centres and sustainable transport hubs under this option, this may put pressure on existing greenspaces from the level of demand with limited opportunities to create new green spaces.		
		Reduce health inequalities within GM and with the rest of England?	o	+	+	D	P	Local / GM				None identified
		Promote access to green space?	o	-	-	D	P	Local / GM				A policy input to improve access to green spaces on edge of urban area and beyond into the countryside from the urban area.
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. However there is a potential risk, that over time, existing facilities could be put under pressure from the level of demand in the urban area as there might be limited opportunities to create new facilities on new land in Green Belt.	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 existing facilities 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 / GM				As above.
		Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?	o	+ / ?	+ / ?	D	P	Local / GM				Ensure playgrounds etc are a policy requirement and located in accessible locations.
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 facilities. However there is a potential risk, that over time, existing facilities	Potential capacity issues if facilities are not developed at same rate as residential developments.	Ensure existing facilities can cope with the increased demand or plans are in place to increase capacity or develop new facilities.

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
		Improve educational and skill levels of the population of working age?	o	+ / ?	+ / ?	I	P	Local / GM		could be put under pressure from the level of demand in the urban area as there might be limited opportunities to create new facilities on new land in Green belt.		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	The spatial pattern of development under this option would seek to maximise sustainable transport options for residents of GM. There is a need to ensure that in the long term sustainable transport provision can keep pace with the level of demand.	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.
		Promote a safe and sustainable public transport network that reduces reliance on private motor vehicles?	+	++	+/?	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?	+	++	+/?	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.	Increased trips by private motor vehicle will worsen the air quality over time if sustainable modes are not utilised.	None identified.

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)							
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	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 corridors may be affected by development. Larger sites on the edge of the urban area have the potential to create new sites of ecological interest and the development of multi-functional sites co-located next to housing.	Wildlife, geological and other sites that have a landscape value or value to different habitats deteriorate if they are not enhanced and managed. 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	The GMSF should promote a strategic approach to ecological sites and networks and consider a GM-wide plan of conservation and enhancement.
		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?	o	+/?	+/?	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	Ensure that communities, existing and new developments and infrastructure systems are resilient to	+/-	+/-	+/-	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	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.

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
	expected climate change	the predicted effects of climate change across GM?								drainage infrastructure in the urban areas, which if not invested 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	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 limited 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.	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	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. 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 / GM				As above.
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	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

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. As such, a basic level of compliance is assumed 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.		network, linking to other agendas.
		Promote management practices that will protect water features from pollution?	o	o	o	D	P	Local / GM				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 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 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?	o	o	o	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	Improve landscape quality and	?	?	?/-	D	P	Local	Receptors: protected landscapes and/or built heritage assets.	Under this option, there may be some pressure to build on or adjacent to green and public	Landscape quality is reduced and character is lost from	The GMSF should protect key environmental assets through policy, key landscape/

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
	landscape, townscape, heritage assets and their setting and the character of GM	the character of open spaces and the public realm?							Protected or locally significant views Affected groups: Non identified	realm spaces which may have an impact on landscapes and townscapes. There is potential for pressure on heritage, townscape and landscape assets from development, but some developments will be subject to specialist assessments such as EIA, landscape assessments and heritage impact assessments to mitigate impacts. Nevertheless there remains a degree of uncertainty as sites may develop incrementally and there may be cumulative impacts.	various assets until it is diminished. Potential for more pressure on Green Belt areas.	townscape/ heritage 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 recognised 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				As above. 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				As above. 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 strongly supports the development of previously developed land, higher densities, 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 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
	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

Spatial Option 4 – Boost northern competitiveness

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 where those already living in deprivation and with disabilities	This option would meet the LHN for Greater Manchester, although it would provide only a minimal buffer above the LHN. The spatial distribution of development includes all identified SHLAA sites in GM, but focuses development in the Green Belt on sites in the north of GM only. The option will boost the supply of housing in the north and should provide an increased amount of affordable housing. There is likely to also be scope for a range of housing types on sites in the south of GM. This option would address inequalities in north GM and is likely to exacerbate existing disparities.	Potential effects with other local development schemes and more pressure on Green Belt sites in the south that could be development in an unplanned way.	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 addresses in district Local Plans.

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 housing land is well-connected with employment land, centres and green space or co-located where appropriate?	+	+	+	D	P	Local / GM		There is uncertainty about affordable housing as this will be dealt with through individual district Local Plans, with a local policy based on each districts need. The spatial option is unlikely to have significant impacts on energy efficient and resilience of housing stock		Where development of sites does not include both housing and employment areas, a strategic approach will be required to link up sites to employment, centres and green space
		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 the drawing up of energy assessments for new developments of a certain size.
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	This option is likely to meet the needs in the north. However need in the south is constrained by a limited supply of land in the south. 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 the urban area, close to town centres and sustainable transport hubs and so would be well served by existing transport infrastructure. It would also release Green Belt land located close to the strategic road network, However infrastructure improvements are likely to be required to meet the needs of new development in these areas.	An imbalance of employment sites with more in the north could lead too unsustainable travel patterns in the long term	In order to meet demand in the south presently unviable sites could potentially be brought forward of a Brownfield land remediation grant scheme could be brought forward
		Support education and training to provide a suitable labour force for future growth?	o	o	o	I	P	GM				GMSF policy should seek to maximise education and skills potential. 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 should undertake a strategic infrastructure assessment to understand capacity for employment development. GMSF policies should require delivery of the necessary transport infrastructure.

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)							
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	Local / GM	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	The development which is concentrated in the existing urban area will link well to the existing transport network and should lead to a greater use of public transport. Developing more allocations in the north will need to provide for adequate transport capacity in these areas 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 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		Although under this option new clusters of development would only be created in the north of GM, outside of the existing urban area		As above
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development?	o	o	o	D	P	Local / GM				Ensure 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	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	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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										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.		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 Multiple Deprivation?	o	+	+	I	P	n/a				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.
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	Discrimination based on protected characteristics is not thought to be affected at this strategic level and for this approach. However, protected characteristics should be considered in policy development. The approach still contains uncertainty around addressing the needs of different areas, but it is believed that there is more potential for this approach to address the needs of areas outside the towns and cities of GM. Specifically, there may be more opportunity to address lack of public transport, Social infrastructure and infrastructure investment in the northern areas. However it will not address equalities in the south.	Potential link to other initiatives which seek to integrate communities	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 equality of opportunity and equal access to facilities / infrastructure for all?	?/+	?/+	?/+	I	P	Local				No direct discrimination has been identified. However, accessibility should be considered when new SI is delivered (eg for disabled and elderly people).

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		Ensure no discrimination based on 'protected characteristics', as defined in the Equality Act 2010?	o	o	o	I	P	Local				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 that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	o	o	o	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.
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	+	I	P	GM	Receptors: built environment, air quality Affected groups: various	This has the potential to reduce the number of people living in poor quality housing in the north (a determinant of health, and likely to affect health inequalities across GM). Large allocations in the north could deliver green spaces, health facilities etc. Improving greenspaces as part of development may make green space more accessible.		Develop minimum standards to ensure all new housing is of a high quality to avoid persistent problems which can affect health Design guidance could be developed to address this.
		Reduce health inequalities within GM and with the rest of England?	o	o	+	D	P	GM				None identified
		Promote access to green space?	? / +	? / +	? / +	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	Ensure people are adequately served by	o	? / +	? / +	D	P	GM	Receptors: GM population Affected groups: all	Large development schemes should deliver new and improved social infrastructure.	The increased number of resident in areas will put pressure on the existing facilities and social	Ensure site allocations contribute to social infrastructure

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	appropriate social infrastructure	key healthcare facilities, regardless of socio-economic status?							groups will be affected by this	More likely to have a positive effect in the north. These areas have had limited investment previously where they are in areas of deprivation	infrastructure and may reduce the quality of services unless more are provided.	
		Ensure sufficient access to educational facilities for all children?	o	? / +	? / +	D	P	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.
		Promote access to and provision of appropriate community social infrastructure including playgrounds and sports facilities?	o	? / +	? / +	D	P	GM				Ensure playgrounds etc are a policy requirement and located in accessible locations
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	Large development schemes should deliver new and improved social infrastructure More likely to have a positive effect in the north. These areas have had limited investment previously where they are in areas of deprivation		Ensure existing facilities can cope with the increased demand or plans are in place to increase capacity or develop new facilities.
		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).

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
												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?	o	+ / ?	+ / ?	D	P	Local / GM	Receptors: GM population, transport network Affected groups: Various	The availability of potential large sites in the Green Belt could allow the co-location of employment and housing Option 4 includes large allocations in north 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 However a positive effect on travel would need a change in travel behaviours to reduce use of private car.	Changes in travel patterns as people begin to take advantage of public transport as their main form of transport	There would be a need for public transport to be delivered as part of development schemes.
		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				Encourage development of strategic cycle network
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	o	o	-	D	P	Local/GM	Receptors: the atmosphere Affected groups: those affected in poor AQMA	This option could deliver development located on the Strategic Road network to meet employment needs which will increase logistics movements but improvements could reduce congestion. It is assumed that development of the sites under this option would generate more private car trips.	Increased trips by private motor vehicle will worsen the air quality over time	Reduce private car travel to the sites. Particular attention would have to be paid to the strategic provision of public transport infrastructure for the allocations to reduce the communities' reliance on private cars and the associated impacts on Air Quality

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										However the plans objectives seek to maximise the use of existing public transport networks, which should reduce air quality impacts from private motor vehicle use, the primary source of AQ impacts in built-up areas.		
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	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 opportunity for enhancement, where development sites have little/no ecological value. The sites will see extensive development on greenfield sites. This presents a risk to ecology and other natural environment receptors, and an opportunity for integration of biodiversity with new development. This should be required through policy with full recognition of the importance of networks and the multifunctional potential of certain sites. Previously inaccessible GI could be made accessible Could improve GI as part of development. Would require specific policy reference	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. Fragile environments in the north of GM.	The GMSF will need to protect/enhance key environmental assets; however exact detail on such assets is not defined. 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 enhance existing sites. Policy restricting development on designated sites, sensitive landscapes etc
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	o	+/?	+/?	D	P	Local/GM				Policy restricting development on designated sites, sensitive landscapes etc 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.
		Support and enhance existing multifunction	o	? / +	? / +	D	P	Local/GM				Policy mitigations

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		al 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?	o	? / +	? / +	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?	o	o	?/-	D/I	P	Local	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	This option includes development across a whole range of areas and of different scales and types albeit all in the north. The main climate change risks to GM have been identified in the scoping report as flooding (direct and secondary effects) and urban heat island. The Heat island effect may be less if development is more dispersed. The loss of large areas of greenfield land could be an issue. Unmitigated, there could be a negative impact in the long term. However, new development also presents opportunities to address existing climate change risk. 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.	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	The GMSF should set out policy which seeks to make GM more resilient to climate change. Urban heat islands should be identified through up to date research which looks at existing areas and Option 4 sites. 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 put in place. The GMSF should support a strategic approach to planning for extreme weather events, which

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
												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	Development of allocations will involve measures to manage existing/future flood risk on site. All development to be brought about following NPPF / EA guidance/best practice and in consultation with the EA. Assumed that all development flood risk assessments will consider increased flood risk from the effects of climate change 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 in the north 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 (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				As above. 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
14	Protect and improve the quality and availability of water resources	Encourage compliance with the Water Framework Directive?	o	o	o	n/a	n/a	wider	Receptors: water courses, ground water, water supplies Affected groups: Various	Neutral/no effect against this objective and assessment criteria identified. There is a strong regulatory framework that development must comply with. Measures associated with water quality are therefore assumed to be	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)

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)							
		Promote management practices that will protect water features from pollution?	o	o	o	D	P	wider		embedded within any new development. As such, a basic level of compliance is assumed across all new development associated with Option 4. Overall, no additional effect is anticipated as a result of Option 4, with the exception of water consumption, which will increase with a net increase in overall housing and employment land.		None identified
		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, 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?	o	o	-/?	D	P	GM	Receptors: Climate Affected groups: All	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.	Increased greenhouse gas emissions and reliance on non-renewable energy sources	The GMSF should exploit low carbon infrastructure technologies. Specific details on this are unknown at this stage. Policy should encourage design in new developments which encourages sustainable energy use. This should cover building fabric (e.g. insulation) and technologies.
		Encourage the development of low carbon and renewable energy facilities, including as part of conventional developments?	o	o	?	D	P	GM				Policy should reinforce existing guidance and include design guidance in policy
		Promote a proactive reduction in direct and indirect greenhouse gas emissions emitted across GM?	o	o	-/?	D	P	GM				Policy should encourage the development of low carbon facilities to decouple economic activity with carbon emissions. Ideally also a carbon reduction target should be included. This should focus on aspects such as energy generation, transport and buildings.

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)							
												Policy should also ensure integration of low carbon/renewable technology in conventional developments. Include in design guide recommendation 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?	?	?	?/-	D	P	Local	Receptors: protected landscapes and/or built heritage assets. Protected or locally significant views Affected groups: Non identified	This Option includes sites that vary (in terms of landscape/townscape/heritage). As such, potential effects will be varied in terms of nature and significance. 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 sites may develop incrementally and there may be cumulative impacts on these types of receptors. Also the inclusion of assets such as Mill buildings has the potential to be brought back into use as part of development that could have a positive effect.	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/ heritage 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 recognised 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.

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
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?	o	?	+	D	P	Local / GM	Receptors: greenfield and brownfield land Affected groups: Non identified	This option strongly and directly supports the development of previously developed land by optimising the existing land supply. Additionally, it encourages redevelopment of derelict land and indirectly supports reductions in land contamination. Green Belt land would be required to be developed in the north with this option, so without further investigation, there is a risk that the best and most versatile agricultural land could be developed.	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 (e.g. through contributions / hypothecated tax regime etc.) Policy could ensure wherever possible there is a brownfield first approach
		Protect the best and most versatile agricultural land / soil resources from inappropriate development?	o	- / ?	- / ?	D	P	GM/wider				The GMSF should include a policy about avoiding the development of the best and most versatile agricultural and where it is possible.
		Encourage the redevelopment of derelict land, properties, buildings and infrastructure, returning them to appropriate uses?	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.
		Support reductions in land contamination through the remediation and reuse of previously developed land?	o	+	+	D	P	Local				As above.
18	Promote sustainable consumption of resources and support the implementati	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 4 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.	Greater waste generation as a result of further development	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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	on of the waste hierarchy									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.		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

Spatial Option 5 – Sustain southern competitiveness

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 where those already living in deprivation and with disabilities	This option would meet the LHN for Greater Manchester, although it would provide only a minimal buffer above the LHN. The spatial distribution of development includes all identified SHLAA sites in GM, but focuses development in the Green Belt on sites in the south of GM only. The option will boost the supply of housing in the south and should provide an increased amount of affordable housing. There is likely to also be scope for a range of housing types on sites in the south of GM. This option would not address inequalities in north GM and is likely to exacerbate existing disparities. There is uncertainty about affordable housing as this will be dealt with through individual district Local Plans, with a local policy based on each districts need. The spatial option is unlikely to have significant impacts on energy efficient and resilience of housing stock	Potential effects with other local development schemes and more pressure on Green Belt sites in the south that could be development in an unplanned way.	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?	+/?	+/?	+/?	n/a	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 addresses in district Local Plans.
		Ensure housing land is well-connected with employment land, centres and green space or co-located where appropriate?	+	+	+	I	P	Local / GM				Where development of sites does not include both housing and employment areas, a strategic approach will be required to link up sites to employment, centres and green space
		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 the drawing up of energy assessments for new developments of a certain size.
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	The option would deliver employment development in the urban area across GM, as well as large employment opportunities in the south of GM particularly around Manchester Airport. This Option would deliver employment opportunities in the urban area, close to town centres and sustainable transport hubs and so would be well served by	Could have cumulative effects with other local development schemes	In order to help meet demand in the north presently unviable sites could potentially be brought forward through a brownfield land remediation grant scheme.
		Support education and training to provide a suitable	o	o	o	I	P	GM				GMSF policy should seek to maximise education and skills potential.

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)							
		labour force for future growth?								existing transport infrastructure. It would also release Green Belt land located close to the strategic road network, However infrastructure improvements are likely to be required to meet the needs of new development in these areas. Under this option employment growth in the north would be constrained to the existing urban area.		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 should undertake a strategic infrastructure assessment to understand capacity for employment development. 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 ?	o	? / +	? / +	D	P	Local / GM	Receptors: transport network, road network, road users, utility network/customers Affected groups: all	The development which is concentrated in the existing urban area will link well to the existing transport network and should lead to a greater use of public transport. Developing more allocations in the south will need to provide for adequate transport capacity in these areas Development of allocations would create clusters of development / communities which would be planned so that they could be supported by the existing transport and utilities capacity or would incorporate improvements to capacity. Although under this option new clusters of development would only be created in the south of GM, outside of the existing urban area.	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.
		Improve transport connectivity?	? / +	? / +	? / +	D	P	Local / GM				As above
		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development ?	o	o	o	D	P	Local / GM				Ensure infrastructure partners are consulted on development proposals
4	Reduce levels of deprivation and disparity	Reduce the proportion of people living	o	+/-	+/-	I	P	Local / GM	Receptors: none identified Affected groups: those	Under this option there will be development which will bring about job creation in construction, and within the employment land	Link to other initiatives or investments (e.g. apprenticeships)	Direct impact will be through: job creation and overall housing stock improvement. However, development near

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
		in deprivation?							identified as living in deprivation	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. However as there is limited development in the north where there is more deprivation this may have a negative impact in these areas		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 Multiple Deprivation?	o	+/-	+/-	I	P	Local / GM				As above.
5	Promote equality of opportunity and the elimination of discriminatio n	Foster good relations between different people?	?	?	?	I	P	Local	Receptors: none identified Affected groups: various, depending on locality	Relations between different people could be affected where sites bring together groups which have been previously separate. Specifically this might be people moving into new areas and where communities are well established as the development locations will	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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										be within and around existing built up areas. Discrimination based on protected characteristics is not likely to occur under this option.		communities as well as new/future communities.
		Ensure equality of opportunity and equal access to facilities / infrastructure for all?	o	o	+	I	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. Physical links between exiting communities to proposed (new) social infrastructure within allocations should be encouraged to help integration and equal access. Include in design guide recommendation
		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 (eg for disabled and elderly people).
		Ensure that the needs of different areas, (namely urban, suburban, urban fringe and rural) are equally addressed?	o	o	o	D	P	GM				Consider SI needs at specific locations as sites come forward.
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	o	I	P	GM	Receptors: built environment, air quality Affected groups: various	This option 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). However this will be focused on the south	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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
										of Greater Manchester and will not deliver the required units in the north of GM. Large allocations in the south of GM could deliver new green spaces, health facilities etc as well as delivering improving links to existing green spaces and facilities. Improving greenspaces as part of development may make green space more accessible		development, into retrofitting old housing stock.
		Reduce health inequalities within GM and with the rest of England?	o	o	o	D	P	GM				As above.
		Promote access to green space?	? / +	? / +	? / +	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	? / +	? / +	I	P	GM	Receptors: GM population Affected groups: all groups will be affected by this	It is assumed that new facilities will be delivered alongside development, particularly for large development schemes. Social infrastructure is more likely to be delivered in the south. Investment in the north is likely to be more limited and this may negatively affect existing areas of deprivation.	The increased number of resident 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	? / +	? / +	I	P	Local				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.
		Promote access to and provision of appropriate community social infrastructure	o	? / +	? / +	D	P	Local				Ensure playgrounds etc are a policy requirement and located in accessible locations.

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		including playgrounds 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	o	o	D	P	Local / GM	Receptors: GM population and the GM economy Affected groups: various / all	The development of housing and employment land under Option 5 does not necessarily support improvement in education; however, the allocations are generally large and will likely include provision for new schools. Although impacts are likely to be more positive in the south. 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 additional training and up-skilling over the long term.	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	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 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?	o	+ / ?	+ / ?	D	P	Local / GM	Receptors: GM population, transport network Affected groups: Various	Option 5 includes large allocations in 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.	Changes in travel patterns as people begin to take advantage of public transport as their main form of transport	The GMSF should promote 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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		Support the use of sustainable and active modes of transport?	o	+	+	D	P	Local / GM		The availability of potential large sites in the Green Belt could allow the co-location of employment and housing. However a positive effect on travel would need a change in travel behaviours to reduce use of private car.		As above.
10	Improve air quality	Improve air quality within Greater Manchester, particularly in the 10 Air Quality Management Areas (AQMAs)?	o	?/-	? / -	I	P	Local/GM	Receptors: the atmosphere Affected groups: those affected in poor AQMA	It is assumed that development of the sites under this option would generate more private car trips. However the plans objectives seek to maximise the use of existing public transport networks, which should reduce air quality impacts from private motor vehicle use, the primary source of AQ impacts 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 development.
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	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 opportunity for enhancement, where development sites have little/no ecological value. The option will see development on greenfield sites. This presents a risk to ecology and other natural environment receptors, as well as an opportunity for integration of biodiversity with new development. This should be required through policy with full recognition of the importance of networks and the multifunctional potential of certain sites.	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 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 enhance existing sites
		Avoid damage to or destruction of designated wildlife sites, habitats and species and protected and unique geological features?	o	? / +	? / +	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	o	? / +	? / +	D	P	Local/GM				Policy should stress the value of multifunctional green infrastructure, recognising the

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		multifunctional green infrastructure and / or contribute towards the creation of new multifunctional green infrastructure?										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?	o	? / +	? / +	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?	o	o	- / ?	D / I	P	Local	Receptors: communities, various aspects of the built and natural environment Affected groups: potential for various groups to be affected	This option includes development across a whole range of areas and of different scales and types albeit with a focus on the south. The main climate change risks to GM have been identified in the scoping report as flooding (direct and secondary effects) and urban heat island. Many allocations in the south are on the edge of GM and are therefore less likely to contribute to or suffer from the urban heat island effect. Unmitigated, there could be a negative impact in the long term. However, new development also presents opportunities to address existing climate change risk. 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.	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.	The GMSF should set out policy which seeks to make GM more resilient to climate change. Urban heat islands should be identified through up to date research which looks at existing areas and Option 4 sites. 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

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												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	Development of allocations will involve measures to manage existing/future flood risk on site. All development will follow EA guidance/best practice. It is assumed that all flood risk assessments will consider increased flood risk from the effects of climate change. 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 in the south 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 (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 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				
14	Protect and improve the quality and availability of	Encourage compliance with the Water	o	o	o	n/a	n/a	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	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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
	water resources	Framework Directive?								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.		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				None identified.
		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?	o	o	-/?	D	P	GM / wider	Receptors: Climate Affected groups: All	This option sees development continue across GM but particularly the south. 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.	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.
		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. Policy should include a carbon neutral target.
		Promote a proactive reduction in direct and indirect greenhouse gas emissions	o	o	?+	D	P	GM / wider				As above.

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		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	This option includes allocations which vary (in terms of landscape/townscape/heritage) and cover areas in the south of GM. Potential effects will be varied in terms of nature and significance. 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 sites may develop incrementally and there may be cumulative impacts on these types of receptors.	Landscape impact in north could be significant. Landscape quality is reduced and character could be lost	The GMSF should protect key environmental assets through policy, key landscape/townscape/heritage 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).
		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	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 strongly and directly supports the development of previously developed land by optimising the existing land supply. Additionally, it encourages redevelopment of derelict land and indirectly supports reductions in land contamination.	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 (e.g. through

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	manner to meet the housing and employment needs of GM, whilst reducing land contamination									Green Belt land would be required to be developed in the south with this option, so without further investigation, there is a risk that the best and most versatile agricultural land could be developed.		contributions / hypothecated tax regime etc.)
		Protect the best and most versatile agricultural land / soil resources from inappropriate development?	? / -	? / -	? / -	I	P	Local / GM				The GMSF should include a policy about avoiding the development of the best and most versatile agricultural and where it is possible.
		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.
		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 schemes; intradevelopment 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	GM / wider				As above
		Promote reduced waste	o	- / ?	- / ?	D	P	GM / wider				As above

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		generation rates?										

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	+/-	+/-	+/-	D	P	Local / GM				To ensure land is well connected Policies must ensure allocations are accessible by public transport

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
		where appropriate?										
		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 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	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. 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.	Could have cumulative socio-economic and environmental effects with other local development schemes.	None required as need will be met.
		Support education and training to provide a suitable labour force for future growth?	o	o	o	n/a	n/a	n/a				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	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.

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		Ensure that utilities / digital infrastructure can support and enable the anticipated scale and spatial distribution of development?	?	?	?	D	P	Local / GM		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.		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 identified as living in deprivation	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 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.	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.
		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				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.

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
												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 (eg for disabled and elderly people).
		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

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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. 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.	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 facilities for all children?	o	+/?	+/?	D	P	Local / GM				As above.
		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.

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
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 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	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 reduces reliance on private motor vehicles?	++	++	+/?	D	P	Local / GM				As above.
		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	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.

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										of sustainable transport, could increase car journeys.		
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 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.	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 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	+/?	+/?	+/?	D	P	Local				As above.

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
		for recreation, amenity and tranquillity?										
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	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 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.	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.
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 accommodat	o	o	+	D	P	Local / GM				Policies should include appropriate drainage standards.

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)							
		e future levels of 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	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 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.	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.
		Promote management practices that will protect water features from pollution?	o	o	o	D	P	Local / GM				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.

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
		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, 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	Receptors: protected landscapes and/or built heritage assets. Protected or locally significant views Affected groups: Non identified	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 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.	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/heritage 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 recognised 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

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
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	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, properties, buildings and infrastructure. This option supports reductions in land contamination through the remediation and reuse of previously developed 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 from inappropriate development?	-/?	-/?	-/?	D	P	Local / GM				
		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.	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	o	-/?	-/?	D	P	Local / GM				None identified

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			ST (0-4 years)	MT (5-9 years)	LT (10+ years)							
		up the waste hierarchy?								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		
		Promote reduced waste generation rates?	o	-/?	-/?	D	P	Local / GM				None identified