Kent Downs National Landscape

MEDWAY LOCAL PLAN REG 18 CONSULTATION

15th JULY to 8th SEPTEMBER 2024

RESPONSE FROM THE

KENT DOWNS NATIONAL LANDSCAPE TEAM

On 22nd November 2023, all AONBs in England and Wales were renamed National Landscapes. The Kent Downs National Landscape is the new name for the Kent Downs AONB.

Beautiful, thriving landscapes that everyone feels part of.

Thank you for the opportunity to provide representations on the latest iteration of the Medway Local Plan 2041. We hope that you find the following comments beneficial in working towards the Regulation 19 Draft and are happy to discuss these with you further should you find this helpful.

Introduction

On 22 November 2023 all designated Areas of Outstanding Natural Beauty (AONBs) in England and Wales became 'National Landscapes' (NLs). As such, the Kent Downs AONB has been renamed the Kent Downs National Landscape. Its legal designation and policy status remain the same and the legislation still refers to Areas of Outstanding Natural Beauty. However, it is requested that, with the exception of the AONB Management Plan which will retain its name until it is next reviewed, references to the Kent Downs AONB are amended to the Kent Downs National Landscape in the Plan and an explanation of the new name is provided in future iterations of the Plan.

Also of note is an amendment to the Countryside and Rights of Way Act, the primary legislation relating to Areas of Outstanding Natural Beauty, introduced through the Levelling-Up and Regeneration Act 2023[1]. The amendment replaces the previous Duty of Regard in AONBs set out at Section 85 of the Act with a new, strengthened requirement that:

'*In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England, a relevant authority other than a devolved Welsh authority* ***must seek to further the purpose of conserving and enhancing the natural beauty*** *of the area of outstanding natural beauty'. (Part 12 - Miscellaneous; Section 245. Protected Landscapes; paras (5) - (10).*

This new duty came into legal effect on 26th December 2023 and places a much stronger duty on relevant authorities (including local authorities, the Planning Inspectorate and other Government Departments, Statutory Undertakers etc) to ensure that their actions and decisions seek to conserve and enhance AONBs, marking a significant change to the legal context of AONB policy. Guidance on the new Duty is currently being prepared by DEFRA and it is understood that this will include a specific provision that Local Plans should align with, and help deliver the aims, objectives and principles of the Kent Downs Management Plan.

[1] https://www.legislation.gov.uk/ukpga/2023/55/enacted#section-245-6|(6)]%20to%20[https://www.legislation.gov.uk/ukpga/2023/55/enacted#section-245-10|(10)]

GENERAL COMMENTS

Our response to this Regulation 18 Consultation follows on from the comments we provided to the consultation 'Setting the Direction for Medway 2040' in October 2023. Where appropriate reference is made in this representation to such previous comments.

For the reasons we elaborate upon below, we have concerns that the Regulation 18 Draft Medway Local Plan does not comply with the new legal duty that the LURA 2023 has imposed on the Council. This new duty should be applied holistically throughout the plan, including within the Plan's vision and objectives, strategic policies, non-strategic policies and site allocations. As our representations set out, the Plan does not yet do so in a number of policy areas. We hope the following comments are helpful in indicating how such concerns can be resolved.

CHAPTER 2: VISION AND OBJECTIVES

Vision

The Kent Downs National Landscape welcomes the refreshed vision and strategic objectives for the Plan. However, we still have concerns with the wording of this part of the Plan.

We support the commitment, in the Vision for Medway to 2041, to 'strengthening natural assets' and to conserving and enhancing its intrinsic cultural and natural heritage and landscapes. However, it is our view that, in setting the framework that will underpin the approach to planning and development across Medway to 2041, the Vision should also explicitly state that the natural beauty of the Kent Downs National Landscape will have been conserved and enhanced, in order to comply with the new legal duty and with the NPPF (paragraph 181).

We therefore suggest the following amendments:

[...] Growth has been shaped by understanding the area's important natural and historic environments, by conserving and enhancing the Kent Downs National Landscape, by respecting landscape character and settlement identity and by strengthening distinctiveness.

[...]

"Medway has conserved and enhanced the natural beauty of the Kent Downs National Landscape, its intrinsic cultural and natural heritage and landscapes, alongside high quality development to strengthen the area's distinctive character. [...]

Strategic Objectives

We welcome the changes that have been to the Strategic Objectives. In particular we support the inclusion of a Strategic Objective to "conserve and enhance assets of international and national importance for nature and landscape, including the KDNL landscape", as our previous response had requested.

Spatial Development Strategy

We suggest that the Plan would benefit from additional supporting paragraph/s to briefly explain the development of the Spatial Development Strategy and its role within the Plan. It is unclear as to how this overarching spatial strategy adds to the Vision and the Strategic Objectives for Medway.

In developing the spatial strategy, a clear differentiation between the approach to designated and non-designated landscapes in Medway should be taken, in order to comply with the NPPF (paragraph 181). This requires that Plans differentiate between land of the highest environmental quality and that of lesser quality, and that development is allocated accordingly to areas of lesser environmental value. In addition, in order to comply with the NPPF (paragraph 183) any allocations within the National Landscape should be small-scale unless there are exceptional circumstances, and where it can be demonstrated that the development is in the public interest.

Whilst paragraph 183 refers to permissions, it has also been considered to apply to allocations within Local Plans by Local Plan Inspectors. Legal advice provided to the South Downs National Park Authority by Landmark Chambers also concluded that "it would arguably amount to an error of law to fail to consider paragraph 116 (now 183) at the site allocations stage of plan making for the National Park. The consequence of doing so would be to risk allocating land for major development that was undeliverable because it was incapable of meeting the major development test in the NPPF".

Tests a) and b) of paragraph 183 are in fact more appropriate to the plan-making stage when the needs for development are being established and alternative options for provision are fully considered. The scope for this to be done at planning application stage is much more restricted. The starting point of paragraph 183 is that major development should only be permitted in a National Landscape "in exceptional circumstances, and where it can be demonstrated that the development is in the public interest". This is a separate requirement to the tests set out at a), b) and c) and sets a very high bar.

We therefore object to the Spatial Development Strategy as we do not consider that, as currently drafted, it is compliant with either the NPPF or the Duty given that it doesn't

explicitly state that there will be a higher restriction on development in the protected landscapes than in the non-protected landscapes of Medway (despite the preferred indicative sites appearing to have been based on such approach). We therefore recommend a number of amendments to the text to resolve this as follows:

[Para 1] Development is supported where it demonstrates that it seeks to further the purpose of conserving and enhancing the natural beauty of the Kent Downs National Landscape, contributes to the conservation and enhancement of the natural and built environment, and the Council's ambitions for sustainable growth, set out in the strategic objectives in the plan.

[...]

[para 3] Medway has a high proportion of land designated as of national or international importance for wildlife and landscape. These areas have the highest degree of protection from development. Within the Kent Downs National Landscape major development will only be permitted in exceptional circumstances and where it can be demonstrated that it is in the public interest in the interest of seeking to further the purposes of conserving and enhancing the natural beauty of this designated landscape. ~~and the policies in this plan require their conservation and enhancement~~.

CHAPTER 3: SPATIAL GROWTH OPTIONS

The Kent Downs National Landscape team supports the 'brownfield first' approach embodied in SGO3. We welcome recognition of the designated landscapes in shaping the spatial approach to growth and support this section of the Plan subject to an amendment to paragraph 3.1.6 to ensure that the spatial growth strategy on which the Plan is based meets the new LURA statutory Duty on the Council to seek to further the purpose of conserving and enhancing the natural beauty of the Kent Downs.

3.1.6 [..] Much of the undeveloped land adjacent to existing settlements in suburban and rural areas adjoins farmland of the best and most versatile quality. There are also large areas designated of international and national environmental importance. In considering potential development allocations in suburban and rural areas, the Council acknowledges the need to conserve and enhance the ~~important~~ protected habitats and landscapes, including the natural beauty of the Kent Downs National Landscape [...]

CHAPTER 4 : NATURAL ENVIRONMENT

As an overall comment on Chapter 4, we find a degree of overlap and repetition between policies and suggest that this Chapter needs reworking. We are happy to provide advice on this if it would be helpful.

Also on general matters, we suggest that Policy S6 Kent Downs National Landscape is moved to sit immediately after Policy S3 to reflect the hierarchy of international and national designated landscapes that Medway enjoys, and that Policy S7 would, for similar reasons, sit better earlier on in the chapter rather than at the end as is currently drafted, where it appears adrift from the other designated land-based policies.

Policy S2 Conservation and Enhancement of the natural environment.

The Kent Downs National Landscape Team objects to Policy S2, the Plan's strategic policy for the natural environment, as currently worded. We do not consider that, in respect of the Kent Downs National Landscape, Policy S2 is compliant with the NPPF, or with the new statutory duty on the Council introduced through the Levelling Up and Regeneration Act 2023 which places a legal duty on the Council to seek to further the purpose of conserving and enhancing the natural beauty of the National Landscape in carrying out all of its actions.

The NPPF (paragraph 20 (d)) requires that Local Plans set out strategic policies to conserve and enhance the natural environment. Paragraph 181 requires that in doing so, Plans should distinguish between the hierarchy of international, national and locally designated sites. Paragraph 182 requires that great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks and National Landscapes. Paragraph 183 states that planning permission should not be granted for major development in National Landscapes, other than in exceptional circumstances and where it can be demonstrated that the development is in the public interest.

Although Policy S2 states at the outset that the Council 'recognises the hierarchy of sites designated for their importance for nature conservation', the Policy fails to reference the Kent Downs National Landscape in its listing of environmental sites in Medway. The failure to make explicit that the Kent Downs National Landscape has the highest level of landscape protection, and that great weight should therefore be given to conserving and enhancing landscape and scenic beauty here, is incompatible with national policy as set out in the NPPF (paragraphs 181 and 182).

Furthermore, the LURA Act has strengthened national policy on National Landscapes and places a new statutory duty on relevant authorities, which includes Medway Council, to seek to further the purpose of conserving and enhancing the natural beauty of National Landscapes in carrying out all of their actions. Policy S2, which is the

strategic natural environment policy of this Plan, fails to require that development conserve and enhance the natural beauty of the Kent Downs National Landscape, and does not therefore, in our view, meet the requirements of this new legal duty on the Council.

We therefore consider, firstly, that the full hierarchy of environmentally international, national and locally designated sites in Medway should be clearly set out, either in Policy S2 or in the supporting text to this policy.

In addition to an incomplete list of environmentally designated sites in the district, Policy S2 covers a wide range of other environmental policy issues, including HRA requirements, biodiversity and geodiversity, strategic environmental management and biodiversity net gain. Given that the Local Plan contains separate Strategic Policies on Sites of International Importance (Policy S3) and the Kent Downs National Landscape (Policy S6) we suggest that Policy S2 is either substantially reworded to either focus on the different approaches that will be taken to each tier in the hierarchy of international, national and locally designated sites in Medway in compliance with the NPPF, or that it becomes a policy focused solely on Biodiversity and BNG, with Policy S3 providing the strategic policy approach to Sites of International Importance (including the references to HRA requirements currently in Policy S2), and Policy S6 providing the strategic policy approach to the Kent Downs National Landscape.

Policy S4 Landscape protection and enhancement

We support Policy S4 subject to a number of alterations to the text as set out below:

~~The Council seeks to~~ All development should conserve and enhance Medway's landscape character and local distinctiveness~~. It recognises ,~~ the intrinsic character and beauty of the countryside, and reflect the diversity and importance of Medway's landscapes, ~~that~~ including the Kent Downs National Landscape ~~KDNL, the expanses of~~ the North Kent Marshes, and their ~~value of wider~~ landscape settings. ~~The Council attaches great importance to the distinctiveness and quality of landscape in defining Medway's character, the intrinsic character and beauty of the countryside, containing urban sprawl and retaining the separation of settlements~~.

Development ~~and~~ should retain~~ing~~ the separation of settlements~~. is directed towards~~ and be limited to areas of lower landscape sensitivity, ~~with the objective of restoring lost~~ in order to protect landscape character and distinctiveness. New landscaping should be of high ~~and establishing~~ quality in order to enhance the existing landscape in which it is located.

Development proposals should demonstrate how they respect and respond to the character, key sensitivities, and qualities of the relevant landscape character areas, as

detailed in the Medway Landscape Character Assessment and other appropriate design guidance including the Kent Downs Landscape Design Handbook, to ensure that distinctive character is maintained through protection, conservation, restoration and enhancement. This involves consideration of key characteristics and visual attributes including: [...]

Policy S5 Securing Strong Green and Blue Infrastructure

We support this policy but note that Figure 2: Green and Blue Corridors does not include a National Landscape layer. A National Landscape layer should be included within "Tier 1: designated sites SPA SAC Ramsar, National Landscape, and SSSI".

We would also welcome a minor correction in the reference to the Kent Downs in the first paragraph of the Policy as follows:

The Council will conserve and enhance the network of green and blue infrastructure across rural and urban Medway. The highest protection will be given to securing the ecological and landscape interests of sites designated of international importance as a SPA, Ramsar site and/or SAC, or candidate sites, and those of the Kent Downs National Landscape~~s~~. A high level of protection from damaging impacts of development will be given to Sites of Special Scientific Interest and Ancient Woodland.

Policy S6: Kent Downs Area of Outstanding Natural Beauty National Landscape

We welcome the inclusion of a specific Kent Downs strategic policy and therefore support Policy S6, subject to minor alterations to the text of the policy and its supporting paragraphs as follows:

4.7.1 The Kent Downs National Landscape forms an important component of Medway's natural assets. The Kent Downs, which lie to the west and south of ~~Medway~~ of the district are ~~part of an~~ a National Landscape that runs across the county from Downe to Dover. This is an exceptional landscape, and as a result the area is afforded the highest ~~status~~ level of protection in national policy in relation to landscape and scenic beauty. The Council has a legal duty to seek to further the purpose of conserving and enhancing the natural beauty of the National Landscape ~~AONB~~, ~~namely to conserve and enhance natural beauty~~. Medway Council is a member of the Kent Downs Joint Advisory Committee that coordinates actions to conserve and enhance the natural beauty of the National Landscape, including the preparation of a joint Management Plan. The Council has adopted the Kent Downs AONB management plan, 2021-2026, in line with statutory requirements, with the purpose of securing and strengthening the distinctive qualities and features of the AONB, within the context of development and wider changes across Kent and Medway. The AONB Management Plan provides the vision, aims and principles that ~~formulate~~ forms the basis of the Council's policy for the management of

the Kent Downs National Landscape and for carrying out the Council's functions in relation to it.

4.7.2 ~~Land in the~~ The Kent Downs National Landscape ~~NL AONB~~ in Medway sits to the west and east of the Medway river valley and extends to the south of the urban area. It ~~falls within~~ contains three Landscape Character Areas, as defined and assessed by the Kent Downs Landscape Character Assessment used in preparing the current Management Plan. These are the West Kent Downs, Medway Valley and Mid Kent Downs Landscape Character Areas and this supporting evidence for the Kent Downs Management Plan provides guidance specific to each area. It is a strongly historic landscape, and the peaceful rural feel and relative tranquillity contrasts with the nearby urban areas and busy roads. The area is characterised by extensive blocks of woodland, much of it ancient, and the coherent backdrop of scarp woodlands and fields of the Medway Valley. The woodlands form mosaic habitat with unimproved grassland. Medway's only SAC falls within the ancient woodland near Upper Halling, as a part of the wider North Downs Woodland SAC. There are long views from the south. It provides an important rural buffer between the urban areas of Medway and Maidstone and Malling to the south. There are rich layers of history, and the area includes pre-historical sites and is marked by its industrial past. The M2 and Channel Tunnel Rail Link rail bridges sit high at the northern end of the valley. The open views and dominant landform of the area make it a highly sensitive landscape, stressing the importance of its setting. Its sensitivity is increased by its role in the setting of the Medway Valley; its function as a strategic gap between large settlements and a landscape buffer to large urban areas and infrastructure; the inherent value of its cultural and biodiversity sites, and its remarkable survival as a peaceful, rural landscape despite its proximity to settlements, industry and transport infrastructure. Land in the connecting countryside falls within the setting of ~~close to~~ the Kent Downs National Landscape, in areas such as the Capstone Valley, and reflects features of the designated landscape.

4.7.3 The area experiences pressures from development and infrastructure in the wider area and the proximity of urban areas. The Maidstone Local Plan Review 2024 has a strategic allocation adjoining Medway's border at Lidsing for mixed use development including 2000 homes. The Downs have been subject to some anti-social behaviour, including illegal access, and poor land management regimes. The Valley of Visions partnership set up by the Kent Downs team invested in a programme to celebrate and enhance the landscape, which has had legacy benefits, such as tackling illegal use of off-road vehicles. Climate change also presents pressures for habitats and species in the Kent Downs, in common with the wider environment.

4.7.4 There are strategic landscape and wider green infrastructure functions of the designation across local authority boundaries, and benefits of a landscape scale

approach. The importance and potential of the designated area and its setting to strengthen natural capital and to mitigate and adapt to climate change are recognised in the Kent Downs AONB Mmanagement Pplan and emerging work on the Kent and Medway Local Nature Recovery Strategy.

Policy S6: Kent Downs Area of Outstanding Natural Beauty National Landscape

AONBs National Landscapes are nationally designated landscapes and as such have the highest status of landscape protection. Medway includes land in the Kent Downs National Landscape. This will be conserved and enhanced in accordance with its landscape significance.

Development in the National Landscape, and within its setting, must demonstrate that it meets the aims of the Kent Downs AONB National Landscape Management Plan and associated supporting relevant policy guidance and will only be permitted where it conserves and enhances the natural beauty of this designated landscape. The design scale, setting and materials should be appropriate to the National Landscape. Major development within the National Landscape will only be permitted in exceptional circumstances and where it can be demonstrated that it is in the public interest.

Other development within the National Landscape and its setting, both in including that which will affect views to and from the designated landscape, will be permitted provided that:

a. the location, form, scale, materials and design would conserve and enhance the character of the landscape;
b. the development would conserve and enhance the special qualities, distinctive character and tranquillity of the National Landscape and avoids adverse impacts, unless these can be satisfactorily mitigated; and
c. the development furthers the delivery of the Kent Downs AONB National Landscape Management Plan and having regard to any associated guidance.

Actions to conserve and enhance the AONB National Landscape shall be informed by a landscape assessment, having considered any relevant landscape character appraisals and shall focus upon:

a. damaged landscapes and features relating to the proposals, especially those supporting AONB National Landscape designation, including the scarp slope dramatic landform and views, dry valleys, woodlands, biodiversity-rich habitats, farmed landscapes, pastoral scenery, villages, historic and cultural heritage, geology and natural resources;
b. locally distinctive patterns and species composition of natural features such as trees, hedgerows, woodland, field boundaries, watercourses and waterbodies;

c. the locally distinctive character of buildings, settlements and their landscape settings, including the transition between man-made and natural landscapes at the urban fringe;
d. visually sensitive skylines, geological and topographical features;
e. landscapes of cultural, historic and heritage value;
f. important views and visual amenity; and
g. relative tranquillity and remoteness and the need to avoid intrusion from light pollution, noise, and motion.

Opportunities to restore and enhance the special characteristics and natural capital of the Kent Downs National Landscape, particularly at a landscape scale will be encouraged.

4.7.5 The purpose of the ~~AONB~~ National Landscape designation is primarily to conserve and enhance natural beauty as set out in the Countryside and Rights of Way Act 2000 as amended by the Levelling Up and Regeneration Act 2023. This is recognised in national policy and guidance, and the status of ~~AONBs as~~ National Landscapes, alongside National Parks, has been strengthened through the new duty for public bodies to seek to further the purpose of the designation.

4.7.6 The Kent Downs ~~AONB~~ National Landscape is a material consideration in plan making and decision making. The Council will give a high priority to the Kent Downs AONB Management Plan vision, aims, principles and actions in its planning policies, development management decisions and planning enforcement cases, and in carrying out other relevant functions.

4.7.7 The importance of the setting of a designated ~~AONB~~ National Landscape is recognised in national planning policy and guidance, especially where long views are identified as important, such as in the Kent Downs National Landscape to the south of Medway. The Capstone Valley, in particular, shares similar characteristics to the landscape of the Kent Downs and contributes to its setting. It is a 'gateway' to the National Landscape ~~AONB~~ and provides a key function as a transition zone between the ~~AONB~~ National Landscape and built-up areas of Medway. The area is identified as a strategic component of green infrastructure in Medway, with the potential for strengthening cross border green networks.

4.7.8 Working strategically at a landscape scale offers opportunities to strengthen nature recovery networks and wider green infrastructure and provide mitigation and resilience to climate change through landscape scale restoration, conservation and enhancement. This is the approach taken through the Making Space for Nature partnership in developing the Local Nature Recovery Strategy. The Kent Downs management plan notes the impacts of climate change on the designated landscape

and the potential for the area to contribute to nature-based solutions, such as through a strategic approach to woodland and tree cover expansion.

CHAPTER 5: BUILT ENVIRONMENT

We welcome reference in paragraph 5.2.9 to the Kent Downs AONB Management Plan and supporting guidance, as part of the suite of design guidance documents that should be consulted as part of the design process.

CHAPTER 7: EMPLOYMENT

We welcome reference in paragraph 7.7.4 to the work of the Kent Downs National Landscape team on sustainable tourism.

Policy T14 Rural Economy

We support this policy, subject to an additional criterion to meet the new legal Duty. We also suggest a number of changes to the supporting text as follows:

7.9.1 Medway's administrative area is home to over 279,800 residents and covers 19,354 ha of land, of which 35% are urban areas, and 65% is rural.[90] Around two-thirds of Medway's area is rural, and this is home to around a sixth of the population. Medway's rural areas include the Hoo Peninsula to the north, and Cuxton and Halling to the south-west~~, the Kent Downs, North Kent Marshes~~, and the internationally and nationally designated landscapes ~~wildlife habitats~~ of the Kent Downs and the North Kent marshes.

7.9.5 Growth and diversification of farming and horticultural activities may require supporting infrastructure, such as processing, packing and production facilities, within areas such as the Hoo Peninsula. Occasionally, visitor attractions related for example to vineyards, also form part of an enterprise's approach to diversification. This can sometimes lead to significant change in the rural landscape, should existing employment locations and on farm sites, not be available or appropriate. Business growth needs under these circumstances will ~~therefore~~ need to be balanced ~~by~~ against the need to conserve and enhance the natural beauty of the Kent Downs National Landscape in the case of farming diversification schemes in the protected landscape and in all cases by careful consideration of any potential adverse impacts on the character of the countryside and natural environment.

Policy T14: Rural Economy

The vision for Medway's rural economy is to secure sustainable growth and service provision in rural communities, while seeking to protect and manage the impact on the environment, natural assets and landscapes.

Proposals for employment development in the countryside will be supported if the following criteria are met:

- It does not lead to significant loss of high-grade agricultural land and can be demonstrated that other employment locations, or locations of lower agricultural land value are not suitable.
- It conserves and enhances the natural beauty of the Kent Downs National Landscape and its setting.
- It can be demonstrated that the development will not create a significant amount of traffic that is inappropriate to the rural road network or results in unacceptable harm to the rural area and its surrounds.
- It is of appropriate scale to the location and the wider rural surroundings.
  [...]

POLICIES MAPS

South-West

We welcome the removal of proposed allocations at Upper Bush, Wingate Wood and North Halling, to which we had strong objections when proposed at the previous Local Plan consultation in 2023.

Indicative Preferred Site CHR6: This site lies within the setting of the Kent Downs National Landscape and has the potential to be harmful to the National Landscape as it will be highly visible from the National Landscape which rises immediately to the west. In particular, any development here will be visible in the foreground of views of the River Medway from the Downs. The site is however a brownfield one and due to its location and context is likely to be seen as part of the recent extensive residential development immediately adjacent to it to the north, in views to and from the National Landscape. Should this land be taken forward as a potential allocation, we would welcome the opportunity to work with the Council to ensure appropriate safeguards are included in any policy wording allocating the site, including on lighting, to ensure future development meets the requirements set out in the new Duty and the NPPF.

Indicative Preferred Site CHR11: This is a small site within the setting of the National Landscape. We continue to have no objection to its allocation.

Indicative Preferred Site CHR14: This site, adjacent to the waterfront, has the potential to be harmful to the setting of the National Landscape due to its visibility both from the opposite side of the River Medway and from views from the higher topography within the National Landscape to west. We therefore reiterate our previous consultation response to the proposed allocation of this site. The Kent Downs Landscape Character Assessment Update 2020 specifically notes, at paragraph 10.3.4 '*the open views and dominant landform of the Medway Landscape Character Area make it a highly sensitive landscape. Its sensitivity is increased by its role in the setting of the Medway Valley; its function as a gap between large settlements; the inherent value of its cultural and biodiversity sites, and its remarkable survival as a peaceful, rural landscape despite its proximity to settlements, industry and transport infrastructure'*. The NPPF also refers to development in the setting of AONBs, advising 'while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.

While partially currently occupied by a boat yard, there is very little in the way of any built form on the site and the eastern end of the site is devoid of any storage/development and is rural in appearance. The character of the landscape is very different either side of the Medway bridge. To the southwest of the bridge the character changes from an urban environment to a much more rural one.

Should this land be taken forward as a potential allocation, we would wish to see appropriate landscape evidence provided that demonstrates that the site can be developed without unacceptable detrimental impact to the setting National Landscape, including from potential night effects, and providing this is proven, would welcome the opportunity to work with the Council to ensure appropriate safeguards are included in any policy wording allocating the site to ensure future development meets the new Duty and the requirements set out in the NPPF.

Indicative Preferred Site RWB5: This indicative employment site is located immediately east of the M2 and within the setting of the National Landscape. Visibility between the site and the adjacent National Landscape is likely due to its close proximity to the National Landscape and the topography here. Careful assessment of potential impacts and appropriate mitigation requirements will therefore be needed in any policy wording and would welcome the opportunity to work with the Council to ensure appropriate safeguards are included in any policy wording allocating the site to ensure future development meets the new Duty and the requirements set out in the NPPF.

Policies Map: South-East

We welcome the removal of proposed allocations at Derringstone Farm and on land south of Junction 4 to which we had strong objections when proposed at the previous Local Plan consultation in 2023.

Indicative Preferred Site HW6: This parcel of land north of the M2 in the vicinity of Junction 4 falls within the immediate setting of the Kent Downs AONB. Careful assessment of the cumulative impacts of including this land with existing permission and allocations (including those in the Local plans of neighbouring local authorities) will be required. We continue to request appropriate safeguards are included in any policy allocation of this land to ensure any development is located and designed to avoid or minimise adverse impacts on the National Landscape, and in this regard are happy to work with the Council to ensure appropriate safeguards are included in any policy wording allocating the site to ensure future development meets the new Duty and the requirements set out in the NPPF.

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03 September 2024

Medway Council
planning.policy@medway.gov.uk
via email only

Dear Sir / Madam
Medway Local Plan 2041 Regulation 18 Consultation
July – September 2024
Representations on behalf of National Gas Transmission

National Gas Transmission has appointed Avison Young to review and respond to local planning authority Development Plan Document consultations on its behalf. We are instructed by our client to submit the following representation with regard to the current consultation on the above document.

About National Gas Transmission
National Gas Transmission owns and operates the high-pressure gas transmission system across the UK. In the UK, gas leaves the transmission system and enters the UK's four gas distribution networks where pressure is reduced for public use.

National Gas Transmission assets within the Plan area
Following a review of the above Development Plan Document, we have identified one or more National Gas Transmission assets within the Plan area. Details of National Gas Transmission assets are provided below.

Asset Description
Gas Transmission Pipeline, route: SHORNE TO ISLE OF GRAIN
Gas Transmission Pipeline, route: ISLE OF GRAIN TO GRAVESEND
Middle_stoke_2726 - AGI Gas Transmission Facility
Gas Transmission Pipeline, route: ISLE OF GRAIN TO MEDWAY

A plan showing details and locations of National Gas Transmission's assets is attached to this letter. Please note that this plan is illustrative only.

Please also see attached information outlining further guidance on development close to National Gas Transmission assets.

Utilities Design Guidance
The increasing pressure for development is leading to more development sites being brought forward through the planning process on land that is crossed by National Gas Transmission infrastructure.

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National Gas Transmission advocates the high standards of design and sustainable development forms promoted through national planning policy and understands that contemporary planning and urban design agenda require a creative approach to new development around underground gas transmission pipelines and other National Gas Transmission assets.

Therefore, to ensure that Policy T1 'Promoting High Quality Design' is consistent with national policy we would request the inclusion of a policy strand such as:

"take a comprehensive and co-ordinated approach to development including respecting existing site constraints including utilities situated within sites."

Further Advice

National Gas Transmission is happy to provide advice and guidance to the Council concerning their networks. If we can be of any assistance to you in providing informal comments in confidence during your policy development, please do not hesitate to contact us.

To help ensure the continued safe operation of existing sites and equipment and to facilitate future infrastructure investment, National Gas Transmission wishes to be involved in the preparation, alteration and review of plans and strategies which may affect their assets. Please remember to consult National Gas Transmission on any Development Plan Document (DPD) or site-specific proposals that could affect National Gas Transmission's assets. We would be grateful if you could check that our details as shown below are included on your consultation database:

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Kam Liddar, Asset Protection Lead

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Warwick, CV34 6DA

If you require any further information in respect of this letter, then please contact us.

Yours faithfully,

[redacted]

Matt Verlander MRTPI
Director
[redacted]

AVISON YOUNG

[redacted]

For and on behalf of Avison Young

National Gas Transmission is able to provide advice and guidance to the Council concerning their networks and encourages high quality and well-planned development in the vicinity of its assets.

Gas assets

High-Pressure Gas Pipelines form an essential part of the national gas transmission system and National Gas Transmission's approach is always to seek to leave their existing transmission pipelines in situ. Contact should be made with the Health and Safety Executive (HSE) in respect of sites affected by High-Pressure Gas Pipelines.

National Gas Transmission have land rights for each asset which prevents the erection of permanent/ temporary buildings, or structures, changes to existing ground levels, storage of materials etc. Additionally, written permission will be required before any works commence within the National Gas Transmission's 12.2m building proximity distance, and a deed of consent is required for any crossing of the easement.

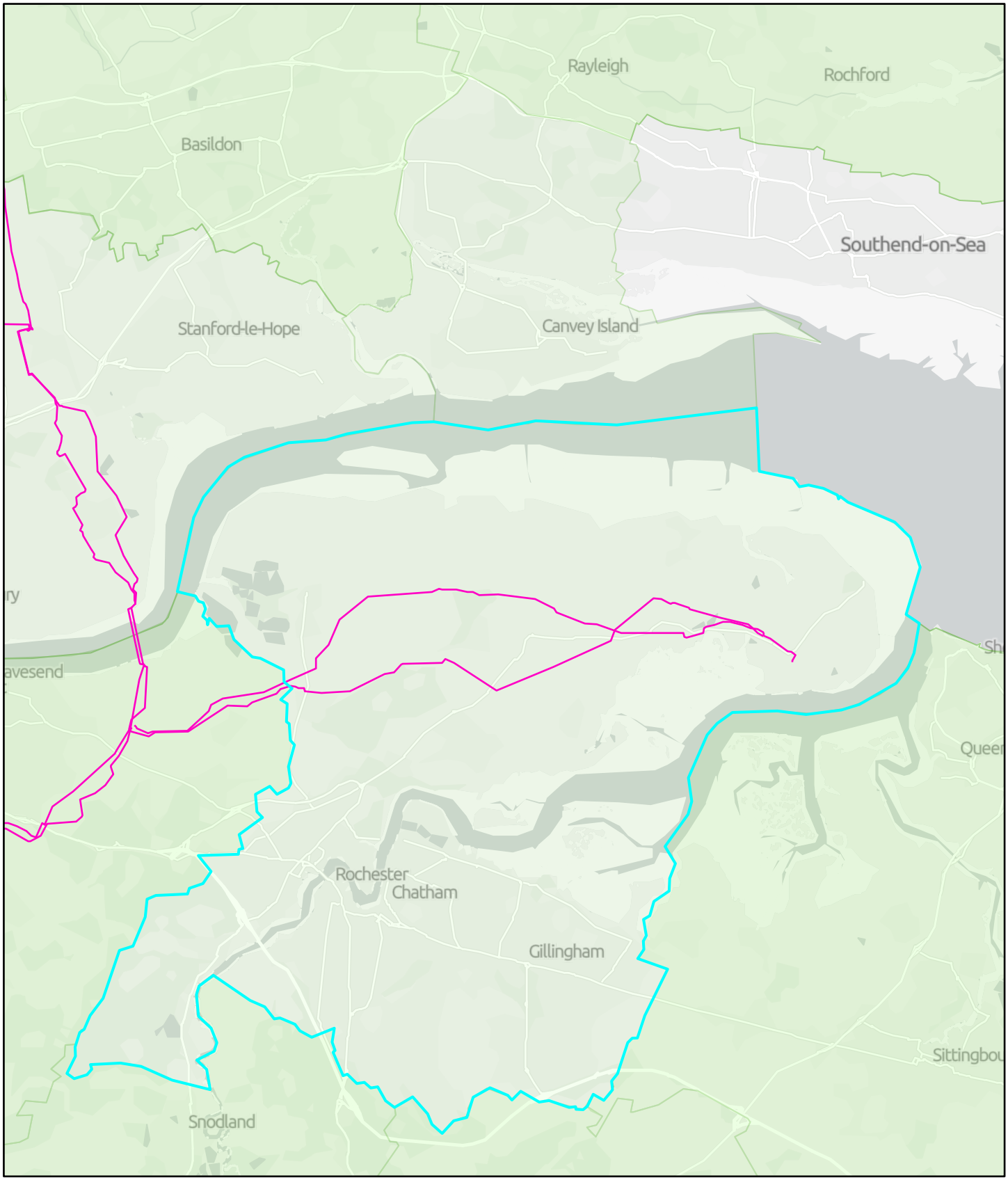
National Gas Transmission's '*Guidelines when working near National Gas Transmission assets'* can be downloaded here: https://www.nationalgas.com/document/82951/download

How to contact National Gas Transmission

If you require any further information in relation to the above and/or if you would like to check if National Gas Transmission's transmission networks may be affected by a proposed development, please visit the website: https://lsbud.co.uk/

For local planning policy queries, please contact: nationalgas.uk@avisonyoung.com

Medway Council: National Gas Asset Map



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AVISON YOUNG

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Forth Street
Newcastle upon Tyne
NE1 3PJ

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Our Ref: MV/ 15B901605

03 September 2024

Medway Council
planning.policy@medway.gov.uk
via email only

Dear Sir / Madam
Medway Local Plan 2041 Regulation 18 Consultation
July – September 2024
Representations on behalf of National Grid Electricity Transmission

National Grid Electricity Transmission has appointed Avison Young to review and respond to local planning authority Development Plan Document consultations on its behalf. We are instructed by our client to submit the following representation with regard to the current consultation on the above document.

About National Grid Electricity Transmission
National Grid Electricity Transmission plc (NGET) owns and maintains the electricity transmission system in England and Wales. The energy is then distributed to the electricity distribution network operators, so it can reach homes and businesses.

National Grid no longer owns or operates the high-pressure gas transmission system across the UK. This is the responsibility of National Gas Transmission, which is a separate entity and must be consulted independently.

National Grid Ventures (NGV) develop, operate and invest in energy projects, technologies, and partnerships to help accelerate the development of a clean energy future for consumers across the UK, Europe and the United States. NGV is separate from National Grid's core regulated businesses. Please also consult with NGV separately from NGET.

NGET assets within the Plan area
Following a review of the above Development Plan Document, we have identified one or more NGET assets within the Plan area. Details of NGET assets are provided below.

Asset Description
4YN ROUTE TWR (001 - 050): 400Kv Overhead Transmission Line route: KINGSNORTH - NORTHFLEET EAST
4VG ROUTE TWR (002 - 042): 400Kv Overhead Transmission Line route: GRAIN – KINGSNORTH
400Kv Underground Cable route: KINGSNORTH - BEDDINGTON
400Kv Underground Cable route: DAMHEAD CREEK - KINGSNORTH
Electrical Substation: DAMC4
Electrical Substation: KINO1
Electrical Substation: KINO4
4TK ROUTE TWR (001 - 033): 400Kv Overhead Transmission Line route: GRAIN - TILBURY

400Kv Underground Cable route: KINGSNORTH 400KV S/S
4VG ROUTE TWR (001 - 002): 400Kv Overhead Transmission Line route: KINGSNORTH - TILBURY
13Kv Underground Cable route: SHUNT REACTOR 1 13KV CABLE
132Kv Underground Cable route: GRAIN SGT5 132kV CABLE
400Kv Underground Cable route: BRITNED 450kV INTERCONNECTOR
Electrical Substation: GRAI4B
Electrical Substation GRAI4
Electrical Substation GRAI5
11Kv Underground Cable route: GRAIN - HORSESHOE POINT 1
11Kv Underground Cable route: GRAIN - HORSESHOE POINT 2
Electrical Substation: HORP4
400Kv Underground Cable route: GRAIN - KEMSLEY 2
400Kv Underground Cable route: GRAIN - KEMSLEY 1

A plan showing details and locations of NGET's assets is attached to this letter. Please note that this plan is illustrative only. Please also see attached information outlining further guidance on development close to NGET assets.

Utilities Design Guidance

The increasing pressure for development is leading to more development sites being brought forward through the planning process on land that is crossed by NGET.

NGET advocates the high standards of design and sustainable development forms promoted through national planning policy and understands that contemporary planning and urban design agenda require a creative approach to new development around high voltage overhead lines and other NGET assets.

Therefore, to ensure that Policy T1 'Promoting High Quality Design' is consistent with national policy we would request the inclusion of a policy strand such as:

"take a comprehensive and co-ordinated approach to development including respecting existing site constraints including utilities situated within sites."

Further Advice

NGET is happy to provide advice and guidance to the Council concerning their networks. Please see attached information outlining further guidance on development close to National Grid assets.

If we can be of any assistance to you in providing informal comments in confidence during your policy development, please do not hesitate to contact us.

To help ensure the continued safe operation of existing sites and equipment and to facilitate future infrastructure investment, NGET wishes to be involved in the preparation, alteration and review of plans and strategies which may affect their assets. Please remember to consult NGET on any Development Plan Document (DPD) or site-specific proposals that could affect our assets.

We would be grateful if you could add our details shown below to your consultation database, if they are not already included:

Matt Verlander, Director

[redacted]

Avison Young
Central Square
Forth Street
Newcastle upon Tyne
NE1 3PJ

Tiffany Bate, Development Liaison Officer

[redacted]

National Grid Electricity Transmission
National Grid House
Warwick Technology Park
Gallows Hill
Warwick, CV34 6DA

If you require any further information in respect of this letter, then please contact us.

Yours faithfully,

[redacted]

Matt Verlander MRTPI
Director
[redacted]
For and on behalf of Avison Young

NGET is able to provide advice and guidance to the Council concerning their networks and encourages high quality and well-planned development in the vicinity of its assets.

Developers of sites crossed or in close proximity to NGET assets should be aware that it is NGET policy to retain existing overhead lines in-situ, though it recognises that there may be exceptional circumstances that would justify the request where, for example, the proposal is of regional or national importance.

NGET's *'Guidelines for Development near pylons and high voltage overhead power lines'* promote the successful development of sites crossed by existing overhead lines and the creation of well-designed places. The guidelines demonstrate that a creative design approach can minimise the impact of overhead lines whilst promoting a quality environment. The guidelines can be downloaded here: https://www.nationalgridet.com/document/130626/download

The statutory safety clearances between overhead lines, the ground, and built structures must not be infringed. Where changes are proposed to ground levels beneath an existing line then it is important that changes in ground levels do not result in safety clearances being infringed. National Grid can, on request, provide to developers detailed line profile drawings that detail the height of conductors, above ordnance datum, at a specific site.

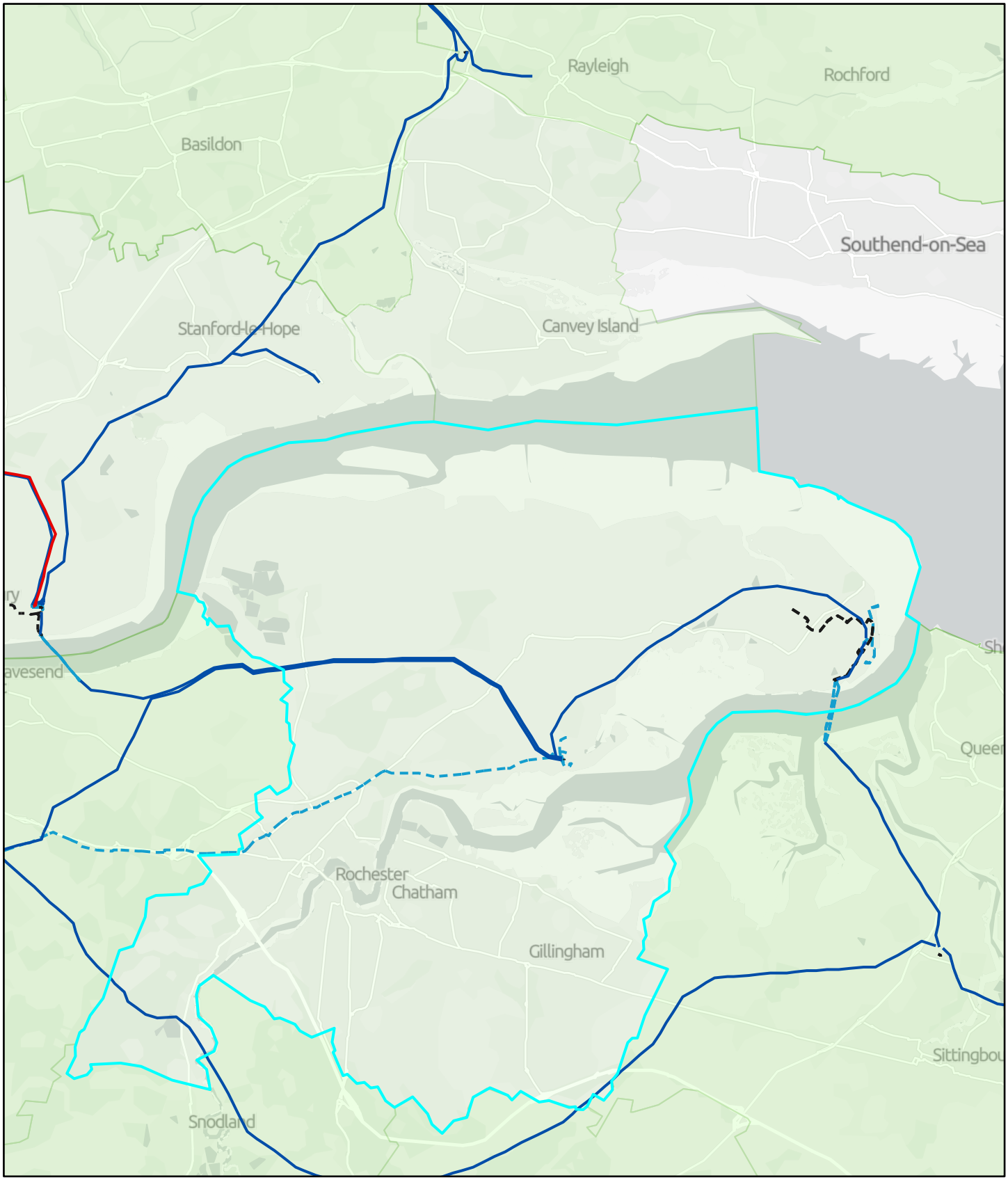
NGET's statutory safety clearances are detailed in their *'Guidelines when working near National Grid Electricity Transmission assets',* which can be downloaded here: www.nationalgridet.com/network-and-assets/working-near-our-assets

How to contact NGET

If you require any further information in relation to the above and/or if you would like to check if NGET's transmission networks may be affected by a proposed development, please visit the website: https://lsbud.co.uk/

For local planning policy queries, please contact: [redacted]

Medway Council: National Grid Asset Map



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Medway Council

Full response

Date
04 September 2024

[redacted]

Your ref

Our ref

Dear Sir/Madam,

Medway Local Plan 2041 - Regulation 18 Consultation

Thank you for consulting Southern Water on the Regulation 18 draft of the Medway Local Plan 2041. Southern Water is the statutory wastewater undertaker for the district, and the water supplier for much of the district.

We were unable to submit all of our comments using the online survey. We therefore attach our full response to this letter for your further reference. Our response is ordered/numbered as per the positioning in draft Plan. Please do not hesitate to contact me further should you have any queries regarding our response.

We hope that you find our response useful and look forward to being kept informed of progress.

Yours faithfully,

[redacted]

Catherine Adamson
Strategic Planning Lead for Kent and East Sussex

Policy S1 Planning for Climate Change

Southern Water supports all requirements which seek to ensure that surface water is appropriately managed, as close to source as possible. We therefore strongly support the content on "multi-functional green infrastructure" within policy S1. However, we would also like to see this policy go further and make suggestions for additional policy wording below.

Southern Water also supports the policy intention to minimise the use of natural resources, and we would welcome a reference to policy DM6 and the water efficiency standard referred to therein (that we submit a separate representation on in our response to this consultation).

Requested changes:

Effective Spatial Planning and Placemaking:

- *Existing surface water flow routes and drainage features within the site should be identified and preserved wherever these contribute to sustainable drainage eg ditches, seasonally dry watercourses, historic ponds.*

Adaptation to climate change:

- *Reducing water consumption using water re-use measures including rainwater harvesting, surface water harvesting and/or grey water recycling systems. Personal water consumption per day for new build should not exceed the Building Regulations recommended standard for water efficiency in water stressed regions.*

Further explanation and justification:

We need planning policy to consider carefully the measures called for in response to the climate crisis, and ensure sustainable development is central to the local planning framework for planning applications coming forward.

Southern Water is strongly supportive of sustainable urban drainage solutions (SuDS) as these will be essential to establishing community resilience to the impacts of climate change into the future. Whilst we appreciate there may be a need for some flexibility, Southern Water considers SuDS essential for all development. This is in line with paragraph 167(c) of the National Planning Policy Framework (NPPF) (2023) that requires:

> *167(c) using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management)*

Southern Water is working across our region to remove surface water from our networks in key areas. Even as we deliver this work, development continues to increase surface water run-off. To be resilient to the evolving impacts of climate change we must plan to ensure that rainwater is separated from wastewater in the design and construction of our communities. For more information on our work, and the root causes of releases from storm overflows, please see – https://www.southernwater.co.uk/our-region/clean-rivers-and-seas-task-force/pathfinders/ https://www.southernwater.co.uk/our-performance/storm-overflows/storm-overflow-task-force

During heavy rain, local sewer networks' drainage capability can be exceeded by the amount of rainwater entering pipes and storage tanks connected via roads, roofs and paved areas. When these fill up, storm overflows release excess water through outfalls into rivers and the sea to prevent flooding of homes and businesses. Storm overflows are part of the network's original design and are regulated by the Environment Agency. Over time, the expansion of urban settlements as well as 'urban creep' (home extensions, conservatories and paving over front gardens for parking) have incrementally added to the amount of rainwater entering sewers, resulting in increased releases from storm overflows. As stated in Water UK's 21st Century Drainage Programme;

“The country’s built environment is constantly changing and “urban creep” – home extensions, conservatories and paving over front gardens for parking – can all add to the amount of water going into our sewers and drains. Green spaces that would absorb rainwater are covered over by concrete and tarmac that will not. In fact, studies show that “urban creep” results in a larger increase in predicted flooding than new housing, because it adds more rainwater to these systems’.

In terms of community resilience to the impacts of climate change into the future, better rainwater management through SuDS is the preferred approach. Retrofitting sustainable drainage solutions can be challenging. By showing the way with new development we can reduce the implementation costs of these measures whilst securing truly sustainable development.

Q1: The Council could consider setting local standards for development that go beyond national policy/regulations in addressing climate change. What evidence would justify this approach, and what standards would be appropriate?

We strongly support the measures included within the draft Local Plan for the mitigation of climate change. We would support their broad adoption across policy for all types of site, for example across policies T10 and T11 to help reduce the risk of negative environmental impacts arising from new development.

Water efficiency:

The South East region incorporates many environmentally sensitive areas and is classified as an area of 'serious water stress'. Significant challenges and environmental improvements need to be addressed, while at the same time enabling some of the highest rates of growth in the country. This together with the increasing impacts of climate change expected over time mean we need to significantly reduce our water use. Tackling water scarcity requires a multi-faceted approach and there is an opportunity for the planning system to play a part by ensuring policy requires new development to meet the highest standards of water efficiency possible at the time.

For water efficiency in the design of new homes, the current Building Regulations standard[1] for water stressed areas is to design for a maximum use of 110 litres of water per person per day. We support the inclusion of the Building Regulations optional standard for water efficiency in policy DM6 of the plan. However, targeting a more efficient standard makes sense in design, in order to ensure that actual use conserves water resources.

We would therefore ideally like to see tighter water efficiency targets in the design of new homes. This is in line with Southern Water's 'Save a Little Water' programme to consume no more than 100 litres per person per day across our region. Also, the Government plans to tighten[2] the Building Regulations standard.

[1] Water_stressed_areas___final_classification_2021.odt (live.com)

[2] https://database.waterwise.org.uk/knowledge-base/building-regulations-water-efficiency-review/ https://www.gov.uk/government/news/ambitious-roadmap-for-a-cleaner-greener-country

High standards of water efficiency in new developments also equate to greater long-term sustainability, future-proofing our communities to the impacts of climate change.

Surface Water management and sustainable drainage:

Southern Water supports all policy requirements which seek to ensure that surface water is appropriately managed, as close to source as possible. We need planning policy to consider carefully the measures called for in response to the climate crisis, and ensure sustainable development is central to the local planning framework for planning applications coming forward. This is also in line with the requirements of paragraph 167(c) of the NPPF (2023). Measures should support the attenuation of flows of surface water run-off from rainfall, as well as surface water infiltration into the ground wherever possible in the local environment. Please see our policy on Sustainable Development here: https://www.southernwater.co.uk/media/ny0nb3qu/our-policy-statement-on-sustainable-development-a4.pdf

Southern Water is strongly supportive of sustainable urban drainage solutions (SuDS) as these will be essential to establishing community resilience to the impacts of climate change into the future. Whilst we appreciate there may be a need for some flexibility, Southern Water considers SuDS essential for all development to ensure mitigation of climate change impacts into the future and ask that this be reflected throughout the Local Plan. Currently paragraph 4.8.18 emphasises the need for SuDS in relation to sewer capacity, where this emphasis could simply be placed on the resilience of communities into the future - as suggested in our proposed changes below:

~~*SuDs measures are of particular importance also for new developments within areas where there may be sewer capacity limitations.*~~ *Increased take up of SuDs will improve resilience of Medway over the Local Plan period and beyond and contribute towards climate adaptation.*

Building Regulations H3 provides a drainage hierarchy whereby surface water should first discharge to a soakaway or other infiltration system where practicable, with discharge to the combined sewerage system a last resort. Development will not be allowed to drain surface water to the foul sewer, and Southern Water will resist new connections of surface water to the combined sewer, this is in line with our surface water management policy: https://www.southernwater.co.uk/media/l23dbon0/surface-water-management-policy-120724.pdf

For effective and sustainable surface water management, we need to ensure the fullest range of SuDS options remain viable to developments, in appropriate locations, to:

- Secure the resilience of our communities into the future by enhancing surface water management in the most sustainable way whilst protecting the natural water cycle.
- Minimise future connections of surface water to foul/combined sewers.
- Ensure policy is enforceable whilst mitigating the risk of rogue behaviours by requiring appropriate levels of treatment in SuDS designs only where the conditions warrant it. Southern Water has produced 'SuDS in SPZ guidance'* to support developers and policy makers when considering SuDS design.
  *https://www.southernwater.co.uk/media/ooubtggs/suds-in-spz-guidance.pdf

We welcome the reference in paragraph 4.8.15 to Environment Agency guidance for the protection of groundwater quality, and ask if the Plan could also refer to this additional guidance (above link) that Southern Water has produced for sustainable urban drainage solutions within source protection zones?

We also ask that for infiltration SuDS within source protection zones, as part of their planning application Developers should provide evidence of having consulted the statutory water company responsible for the SPZ, to confirm the proposed SuDS design is appropriate to this sensitive hydrogeological location. We have made separate representations making this request.

Whilst we appreciate that not all water companies will want to work in the same way, Southern Water needs planning policy wording to help ensure Developers consult Southern Water on their infiltration SuDS designs within SPZ. This will help to ensure infiltration SuDS designs remain as viable as possible per site, whilst being appropriate for their location.

In terms of future flood risk, better rainwater management through SuDS is the preferred approach to avoid placing added pressure on drainage networks during heavy rainfall. We therefore strongly support the requirement to include SuDS within all development. This is also in line with the requirements of paragraph 167(c) of the NPPF (2023) that requires:

> *167(c) using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management)*

Whilst some parts of the wastewater network were originally designed to accommodate surface water, the expansion of towns and cities, and 'urban creep', contributes to increases in surface water run-off. As stated in Water UK's 21st Century Drainage Programme; "*The country's built environment is constantly changing and "urban creep" – home extensions, conservatories and paving over front gardens for parking – can all add to the amount of water going into our sewers and drains. Green spaces that would absorb rainwater are covered over by concrete and tarmac that will not. In fact, studies show that "urban creep" results in a larger increase in predicted flooding than new housing, because it adds more rainwater to these systems*'.

As set out in Defra's Storm Overflows Discharge Reduction Plan "Water companies must remove rainwater from the combined sewer system as part of effectually draining their areas. This should include limiting any new connections of surface water to the combined sewer network, and any new connections should be offset by disconnecting a greater volume of surface water elsewhere within the network". This aligns with Southern Water's work to address problems caused by excess surface water in our sewerage network in order to protect water quality in rivers and sea. For more information please see –
https://www.southernwater.co.uk/our-performance/storm-overflows/storm-overflow-task-force and
https://www.southernwater.co.uk/media/7459/stormoverflows_faq.pdf

Even as we deliver this work, development continues to increase surface water run-off. For communities to be resilient to the evolving impacts of climate change into the future, we need planning policy to ensure that development does not increase flood risk elsewhere.

Policy S5: Securing Strong Green and Blue Infrastructure

Southern Water strongly supports Policy S5 and the inclusion of “multi-functional green infrastructure” wording throughout, as explained further below.

Further explanation and justification:

Southern Water supports all requirements which seek to ensure that surface water is appropriately managed, as close to source as possible. We need planning policy to consider carefully the measures called for in response to the climate crisis, and ensure sustainable development is central to the local planning framework for planning applications coming forward.

Southern Water is strongly supportive of sustainable urban drainage solutions (SuDS) as these will be essential to establishing community resilience to the impacts of climate change into the future. Whilst we appreciate there may be a need for some flexibility, Southern Water considers SuDS essential for all development. This is in line with paragraph 167(c) of the National Planning Policy Framework (NPPF) (2023) that requires:

> *167(c) using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management)*

Southern Water is working across our region to remove surface water from our networks in key areas. Even as we deliver this work, development continues to increase surface water run-off. To be resilient to the evolving impacts of climate change we must plan to ensure that rainwater is separated from wastewater in the design and construction of our communities. For more information on our work, and the root causes of releases from storm overflows, please see –
https://www.southernwater.co.uk/our-region/clean-rivers-and-seas-task-force/pathfinders/
https://www.southernwater.co.uk/our-performance/storm-overflows/storm-overflow-task-force

During heavy rain, local sewer networks’ drainage capability can be exceeded by the amount of rainwater entering pipes and storage tanks connected via roads, roofs and paved areas. When these fill up, storm overflows release excess water through outfalls into rivers and the sea to prevent flooding of homes and businesses. Storm overflows are part of the network’s original design and are regulated by the Environment Agency. Over time, the expansion of urban settlements as well as ‘urban creep’ (home extensions, conservatories and paving over front gardens for parking) have incrementally added to the amount of rainwater entering sewers, resulting in increased releases from storm overflows. As stated in Water UK’s 21st Century Drainage Programme*;*

> *“The country’s built environment is constantly changing and “urban creep” – home extensions, conservatories and paving over front gardens for parking – can all add to the amount of water going into our sewers and drains. Green spaces that would absorb rainwater are covered over by concrete and tarmac that will not. In fact, studies show that “urban creep” results in a larger increase in predicted flooding than new housing, because it adds more rainwater to these systems’.*

In terms of community resilience to the impacts of climate change into the future, better rainwater management through SuDS is the preferred approach. Retrofit of sustainable drainage solutions can be challenging but is also exemplary of good practice, and can be particularly necessary in areas of urban creep.

Explanatory section on pages 48 and 50:

Requested changes:

Paragraph 4.8.12:

Southern Water has developed the DWMP in consultation with Local Authorities, and fed outcomes into the AMP8 business plan proposals, for which the final determination is due from Ofwat in December 2024. We therefore suggest the following changes to this paragraph 4.8.12:

> *Southern Water is the primary provider for wastewater disposal within Medway and ~~are currently~~ developed~~ing~~ Drainage and Wastewater Management Plans in consultation with regional stakeholders across their catchments, including Medway. Drainage and Wastewater Management Plans are long-term plans that will provide an opportunity to improve water quality and drainage systems and will address pollution and flooding for the benefit of communities and the environment. These long-term plans take into account projected growth over the Local Plan period.*

Paragraph 4.8.15:

We welcome the reference in paragraph 4.8.15 to Environment Agency guidance for the protection of groundwater quality, and ask if the Plan could also refer to the additional guidance that Southern Water has produced for sustainable urban drainage solutions within source protection zones here - https://www.southernwater.co.uk/media/ooubtggs/suds-in-spz-guidance.pdf

For effective and sustainable surface water management, we need to ensure the fullest range of SuDS options remain viable to developments, in appropriate locations, to:

- Secure the resilience of our communities into the future by enhancing surface water management in the most sustainable way whilst protecting the natural water cycle.
- Minimise future connections of surface water to foul/combined sewers.
- Ensure policy is enforceable whilst mitigating the risk of rogue behaviours by requiring appropriate levels of treatment in SuDS designs only where the conditions warrant it. Southern Water has produced 'SuDS in SPZ guidance' to support developers and policy makers when considering SuDS design.

Paragraph 4.8.18:

Currently paragraph 4.8.18 emphasises the need for SuDS in relation to sewer capacity, where the emphasis could be more effective when placed on the resilience of communities into the future in the face of climate change, as suggested in the changes we propose below:

> *~~SuDs measures are of particular importance also for new developments within areas where there may be sewer capacity limitations.~~ Increased take up of SuDs will improve resilience of Medway over the Local Plan period and beyond and contribute towards climate adaptation.*

Building Regulations H3 provides a drainage hierarchy whereby surface water should first discharge to a soakaway or other infiltration system where practicable, with discharge to the combined sewerage system a last resort. Development will not be allowed to drain surface water to the foul sewer, and Southern Water will resist new connections of surface water to the combined sewer, this is in line with our surface water management policy.

DM1 Flood & Water Management

Southern Water strongly supports the inclusion of sustainable urban drainage within this policy. However, we would also like to see this policy go further and make suggestions for additional policy wording below.

Requested additions:

Sustainable Urban Drainage:

- *Existing surface water flow routes and drainage features within the site should be identified and preserved wherever these contribute to sustainable drainage eg ditches, seasonally dry watercourses, historic ponds.*
- *To minimise the risk of sewer flooding and protect water quality, surface water will not be permitted to discharge to the foul or combined sewer network.*
- *For infiltration SuDS within source protection zones, as part of their planning application Developers should provide evidence of having consulted the statutory water company responsible for the SPZ, to confirm the proposed SuDS design is appropriate to this sensitive hydrogeological location.*

Further explanation and justification:

Southern Water supports all policy requirements which seek to protect public drinking water supplies and ensure that surface water is appropriately managed, as close to source as possible. We also need to ensure that design of developments will not mean that rainwater continues to run off homes and surfaces so fast that it causes flooding.

In terms of future flood risk, better rainwater management through SuDS is the preferred approach to avoid placing added pressure on drainage networks during heavy rainfall. We therefore strongly support the requirement to include SuDS within all development. This is also in line with the requirements of paragraph 167(c) of the NPPF (2023) that requires:

> *167(c) using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management)*

Building Regulations H3 provides a drainage hierarchy whereby surface water should first discharge to a soakaway or other infiltration system where practicable, with discharge to the combined sewerage system a last resort. Development will not be allowed to drain surface water to the foul sewer, and Southern Water will resist new connections of surface water to the combined sewer this is in line with our surface water management policy here: https://www.southernwater.co.uk/media/l23dbon0/surface-water-management-policy-120724.pdf

Measures should support the attenuation of flows of surface water run-off from rainfall, as well as surface water infiltration into the ground wherever possible in the local environment (see our policy on SuDS in source protection zones below).

Whilst some parts of the wastewater network were originally designed to accommodate surface water, the expansion of towns and cities, and 'urban creep', contributes to increases in surface water run-off. As stated in Water UK's 21st Century Drainage Programme; "*The country's built environment is constantly changing and "urban creep" – home extensions, conservatories and paving over front gardens for parking – can all add to the amount of water going into our sewers and drains. Green spaces that would absorb rainwater are covered over by concrete and tarmac that will not. In fact, studies show that "urban creep" results in a larger increase in predicted flooding than new housing, because it adds more rainwater to these systems*".

As set out in Defra's Storm Overflows Discharge Reduction Plan "Water companies must remove rainwater from the combined sewer system as part of effectually draining their areas. This should

include limiting any new connections of surface water to the combined sewer network, and any new connections should be offset by disconnecting a greater volume of surface water elsewhere within the network". This aligns with Southern Water's work to address problems caused by excess surface water in our sewerage network in order to protect water quality in rivers and sea. For more information please see – https://www.southernwater.co.uk/our-performance/storm-overflows/storm-overflow-task-force and https://www.southernwater.co.uk/media/7459/stormoverflows_faq.pdf

Even as we deliver this work, development continues to increase surface water run-off. For communities to be resilient to the evolving impacts of climate change into the future, we need planning policy to ensure that development does not increase flood risk elsewhere. Please also see our policy statement on Sustainable Development here: https://www.southernwater.co.uk/media/ny0nb3qu/our-policy-statement-on-sustainable-development-a4.pdf

As both a water and wastewater company, Southern Water is a key stakeholder for sustainable drainage solutions (SuDS). SuDS include both infiltration and attenuation measures. Infiltration SuDS are not always appropriate within Source Protection Zones, further explanation is provided in our policy here - https://www.southernwater.co.uk/media/ooubtggs/suds-in-spz-guidance.pdf

The Environment Agency is the regulatory authority on protection of groundwater sources. Southern Water has developed additional guidance in consideration of potable water standards to help safeguard the water quality of SPZ through the responsible design of SuDS.

Whilst we appreciate that not all water companies might want to work in the same way, Southern Water needs planning policy wording to help ensure Developers consult Southern Water on their infiltration SuDS designs within SPZ. This will help to ensure infiltration SuDS designs remain as viable as possible per site, whilst being appropriate for their location.

Also support T1: Promoting High Quality Design

We strongly support the inclusion of sustainable urban drainage solutions within this policy. However, we suggest some additional wording to help ensure this policy is effective in delivering appropriate surface water management.

Requested additions:

We note the following wording in this policy, and suggest additional wording for your consideration here:

- The proposal works with the topography of the site and the inventive incorporation / use / interpretation of existing natural features. *Existing surface water flow routes and drainage features within the site should be identified and preserved wherever these contribute to sustainable drainage eg ditches, seasonally dry watercourses, historic ponds.*

Further explanation and justification:

Southern Water supports all policy requirements which seek to ensure that surface water is appropriately managed, as close to source as possible and has made representations across related policy. We also need to ensure that design of developments will not mean that existing surface water drainage routes are not impeded to result in flooding elsewhere. This is in line with paragraph 167(c) of the National Planning Policy Framework (NPPF) (2023) that requires:

> *using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management)*

Southern Water is working across our region to remove surface water from our networks in key areas. Even as we deliver this work, development continues to increase surface water run-off. To be resilient to the evolving impacts of climate change we must plan to ensure that rainwater is separated from wastewater in the design and construction of our communities. For more information on our work, and the root causes of releases from storm overflows, please see –
https://www.southernwater.co.uk/our-region/clean-rivers-and-seas-task-force/pathfinders/
https://www.southernwater.co.uk/our-performance/storm-overflows/storm-overflow-task-force

In terms of community resilience to the impacts of climate change into the future, better rainwater management through SuDS is the preferred approach. Retrofitting sustainable drainage solutions can be challenging. By showing the way with new development we can reduce the implementation costs of these measures whilst securing truly sustainable development.

DM6

We support the inclusion of the Building Regulations optional standard for water efficiency in policy DM6 of the plan. However, targeting a more efficient standard makes sense at design stage in order to ensure that actual use remains efficient throughout the lifetime of the development. We therefore suggest the following changes for your consideration, explaining our reasoning below:

Requested DM6 changes:

> *All new dwellings must be designed to achieve the Optional Technical Housing Standard for water efficiency described in Building Regulation G2. Design must also consider potential for future tightening of this standard by targeting use at no more than 100 litres per person per day.*

Further explanation and justification:

We support the inclusion of the Building Regulations optional standard for water efficiency in this policy. However, although current Building Regulations indicate this is appropriate to the 'serious water stress'[1] status of the South East, the Government plans to tighten[2] this Building Regulations standard. High standards of water efficiency in new developments also equate to greater long-term sustainability, future-proofing our communities to the impacts of climate change. We would therefore ideally like to see tighter water efficiency targets in the design of new homes. This is in line with Southern Water's 'Save a Little Water' programme to consume no more than 100 litres per person per day across our region.

[1] Water_stressed_areas___final_classification_2021.odt (live.com)

[2] https://database.waterwise.org.uk/knowledge-base/building-regulations-water-efficiency-review/ https://www.gov.uk/government/news/ambitious-roadmap-for-a-cleaner-greener-country

The South East region incorporates many environmentally sensitive areas and is classified as an area of 'serious water stress'. Significant challenges and environmental improvements need to be addressed, while at the same time enabling some of the highest rates of growth in the country. This together with the increasing impacts of climate change expected over time mean we need to significantly reduce our water use.

Tackling water scarcity requires a multi-faceted approach and there is an opportunity for the planning system to play a part by ensuring policy requires new development meet the highest standards of water efficiency possible at the time.

S15: Town Centres Strategy (page 123)

Southern Water supports all policy requirements which seek to ensure that surface water is appropriately managed, as close to source as possible. As acknowledged in the plan, community resilience to the impacts of climate change is essential. We therefore request wording is added to strengthen the effectiveness of this policy S15, as explained further below:

Requested changes:

- Enhancements and provision of *multi-functional* green infrastructure, public realm *incorporating sustainable urban drainage features* and improved access to blue infrastructure where possible.

Further explanation and justification:

Southern Water supports all policy requirements which seek to ensure that surface water is appropriately managed, as close to source as possible. We need planning policy to consider carefully the measures called for in response to the climate crisis, and ensure sustainable development is central to the local planning framework for planning applications coming forward. This is also in line with the requirements of paragraph 167(c) of the NPPF (2023) that requires:

> *using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management)*

Measures should support the attenuation of flows of surface water run-off from rainfall, as well as surface water infiltration into the ground wherever possible in the local environment.

Southern Water is working across our region to remove surface water from our networks in key areas. Even as we deliver this work, development continues to increase surface water run-off. To be resilient to the evolving impacts of climate change we must plan to ensure that rainwater is separated from wastewater in the design and construction of our communities. For more information on our work, and the root causes of releases from storm overflows, please see –
https://www.southernwater.co.uk/our-region/clean-rivers-and-seas-task-force/pathfinders/
https://www.southernwater.co.uk/our-performance/storm-overflows/storm-overflow-task-force

During heavy rain, local sewer networks' drainage capability can be exceeded by the amount of rainwater entering pipes and storage tanks connected via roads, roofs and paved areas. When these fill up, storm overflows release excess water through outfalls into rivers and the sea to prevent flooding of homes and businesses. Storm overflows are part of the network's original design and are regulated by the Environment Agency. Over time, the expansion of urban settlements as well as 'urban creep' (home extensions, conservatories and paving over front gardens for parking) have incrementally added to the amount of rainwater entering sewers, resulting in increased releases from storm overflows. As stated in Water UK's 21st Century Drainage Programme*;*

> *"The country's built environment is constantly changing and "urban creep" – home extensions, conservatories and paving over front gardens for parking – can all add to the amount of water going into our sewers and drains. Green spaces that would absorb rainwater are covered over by concrete and tarmac that will not. In fact, studies show that "urban creep" results in a larger increase in predicted flooding than new housing, because it adds more rainwater to these systems'.*

Stronger integration of sustainable drainage solutions within policy should ensure SuDS are incorporated into new development and public places, whilst also securing truly sustainable development. Please see our policy statement on Sustainable Development here:
https://www.southernwater.co.uk/media/ny0nb3qu/our-policy-statement-on-sustainable-development-a4.pdf

Policy DM19: Vehicle Parking (page 170)

Southern Water would support the inclusion of permeable paving and SuDS in this policy. We therefore suggest the addition of the following wording to this policy:

> *Parking areas should incorporate appropriate sustainable urban drainage measures and developers ensure their design does not increase flood risk locally.*

Further explanation and justification:
Southern Water supports all policy requirements which seek to ensure that surface water is appropriately managed, as close to source as possible. We need planning policy to consider carefully the measures called for in response to the climate crisis, and ensure sustainable development is central to the local planning framework for planning applications coming forward. This is also in line with the requirements of paragraph 167(c) of the NPPF (2023) that requires:

> *using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management)*

Measures should support the attenuation of flows of surface water run-off from rainfall, as well as surface water infiltration into the ground wherever possible in the local environment.

Southern Water is working across our region to remove surface water from our networks in key areas. Even as we deliver this work, development continues to increase surface water run-off. To be resilient to the evolving impacts of climate change we must plan to ensure that rainwater is separated from wastewater in the design and construction of our communities. For more information on our work, and the root causes of releases from storm overflows, please see –
https://www.southernwater.co.uk/our-region/clean-rivers-and-seas-task-force/pathfinders/
https://www.southernwater.co.uk/our-performance/storm-overflows/storm-overflow-task-force

During heavy rain, local sewer networks' drainage capability can be exceeded by the amount of rainwater entering pipes and storage tanks connected via roads, roofs and paved areas. When these fill up, storm overflows release excess water through outfalls into rivers and the sea to prevent flooding of homes and businesses. Storm overflows are part of the network's original design and are regulated by the Environment Agency. Over time, the expansion of urban settlements as well as 'urban creep' (home extensions, conservatories and paving over front gardens for parking) have incrementally added to the amount of rainwater entering sewers, resulting in increased releases from storm overflows. As stated in Water UK's 21st Century Drainage Programme*;*

> *"The country's built environment is constantly changing and "urban creep" – home extensions, conservatories and paving over front gardens for parking – can all add to the amount of water going into our sewers and drains. Green spaces that would absorb rainwater are covered over by concrete and tarmac that will not. In fact, studies show that "urban creep" results in a larger increase in predicted flooding than new housing, because it adds more rainwater to these systems'.*

Stronger integration of sustainable drainage solutions within policy should ensure SuDS are incorporated into new development and public places, whilst also securing truly sustainable development. Please see our policy statement on Sustainable Development here:
https://www.southernwater.co.uk/media/ny0nb3qu/our-policy-statement-on-sustainable-development-a4.pdf

DM21: New Open Space and Playing Pitches

Southern Water strongly supports the consideration of multi-functional green infrastructure within this policy, in particular the wording:

> **Design of new open space**
>
> Proposals for development which include provision of new on-site open space must ensure that new open spaces meet these quality standards below:
>
> (a) Be designed as part of the green infrastructure network, contributing to local landscape character, connecting with local routes and green corridors for people and wildlife as well as providing multi-functional benefits such as addressing surface water management priorities without compromising access.

Southern Water supports the inclusion of permeable paving in the policy. Southern Water supports all policy requirements which seek to ensure that surface water is appropriately managed, as close to source as possible. This aligns with our own work to address problems caused by excess surface water in our sewerage network in order to protect water quality in rivers and sea. For more information please see –
https://www.southernwater.co.uk/our-performance/storm-overflows/storm-overflow-task-force and

Stronger integration of sustainable drainage solutions within policy should ensure SuDS are incorporated into new development and public places, whilst also securing truly sustainable development. Please see our policy statement on Sustainable Development here:
https://www.southernwater.co.uk/media/ny0nb3qu/our-policy-statement-on-sustainable-development-a4.pdfhttps://www.southernwater.co.uk/media/7459/stormoverflows_faq.pdf

Policy S24 Infrastructure Delivery (page 190)

Southern Water may have to provide additional water or wastewater infrastructure to serve new and existing customers or meet stricter environmental standards. It is likely that there would be limited options with regard to location, as the infrastructure would need to connect into existing networks. Planning policies should therefore support proposals that come forward in order to deliver or maintain necessary infrastructure. We therefore request that the following wording is added to this policy, as explained further below:

> *New and improved utility infrastructure will be encouraged and supported in order to meet the identified needs of the community subject to other policies in the plan.*

Further explanation and justification:

We could find no policy wording that specifically supported the general provision of new or improved utilities infrastructure. The NPPF (2023) paragraph 7 establishes that 'supporting infrastructure in a sustainable manner' is key to achieving sustainable development, and although this is acknowledged in relation to developments, broader provision by utilities providers is also sometimes necessary. Also the National Planning Practice Guidance states that 'Adequate water and wastewater infrastructure is needed to support sustainable development'.

Question 42: Do you agree identifying the required infrastructure to support the scale and locations of growth within Medway is the correct approach? Would a 'mini IDP approach' focusing on broad locations and strategic sites be preferred? Or do you have an alternative suggested approach?

Southern Water considers that an approach focusing on broad locations and strategic sites might work well for water and wastewater infrastructure planning. It is important to note that as we deal with natural resources and phenomena, water companies must adopt a catchment-based approach for our asset investment planning. We therefore support collaborative working with all partner organisations on place-based planning. Together we can influence a more resilient future through Local Plans where these acknowledge (as key to their evidence base) the needs of water infrastructure planning. As a priority, we must identify the means to change the way rainwater is managed in communities and promote the changes necessary in the design of new houses and developments. For further information on 'enabling water smart communities' please see:
https://waterinnovation.challenges.org/winners/water-smart-communities/
https://www.ewsc.org.uk/

We explain in more detail below the water industry investment planning process and 5 year cycle that we must comply with.

The current process:

In response to planning policy consultations (and also planning applications where we are consulted on them) Southern Water undertakes a series of checks to plan investment in line with water industry funding routes and cycles. Upgrades are planned, delivered and funded through two main mechanisms – one relates to sewage network capacity, the other to wastewater treatment process (quality and capacity).

Any upgrades (reinforcements) that are needed on the network, specifically to accommodate new development, tend to be defined as local infrastructure as they typically serve one development. These are funded through the new infrastructure charge to developers - https://www.southernwater.co.uk/building-and-developing/our-services/water-services/connecting-charging-arrangements/

Such upgrades are the responsibility of the statutory wastewater undertaker to plan and deliver once a planning application is granted as it is normally local infrastructure to serve that one

development. Currently there is an opportunity to work in partnership with Local Planning Authorities to help ensure that new connections to the sewer are sensibly managed through well evidenced policy making. Preventing connections of surface water to foul or combined sewer networks will be key to safeguarding the capacity and effective operation of the public sewage network into the future.

Infrastructure Delivery Plans offer a further opportunity to work in partnership and agree infrastructure priorities from a place-making standpoint, and as part of this to identify locations and partner-funding for the LPA to incorporate more innovative multi-functional green infrastructure.

Wastewater Treatment Works (WTWs) treat the wastewater collected from homes and businesses within their 'catchment' via a network of connecting pipes and pumping stations. WTWs are significant assets and represent strategic infrastructure. Upgrades to WTWs are funded through the water industry's 5 yearly investment plan which sets out spending requirements over a 5 year period (AMP) using customer generated income as determined by Ofwat, the economic regulator for the industry. We provide below further explanation on how we produce and consult on our strategic investment plans as part of the statutory requirements for the UK water industry.

As the current Regulation 18 consultation draft of the Medway Local Plan contains no housing figures for development locations, we cannot comment on the impacts of Medway development strategy on infrastructure needs for the district.

Water Industry 5-yearly planning cycles

The central purpose of Drainage and Wastewater Management Plans (DWMPs) is to plan for future climates and population while reducing storm overflows, flooding and pollution for the benefit of customers, communities and businesses and to protect and improve the water environment. To do this they typically consider risks and investment priorities over a 25 to 50 year horizon. The DWMP cycle is repeated every 5 years in order that outcomes inform the strategic investment proposals required for the water industry business planning process.

The DWMP process involves extensive consultation with stakeholders, including local planning authorities and the Environment Agency. The outcomes of the DWMP process are fed into investment proposals submitted for Ofwat approval as part our 5-yearly draft business plans. For further information on the guiding principles for DWMPs, please see: Guiding principles for drainage and wastewater management plans - GOV.UK (www.gov.uk)

Water Resource and Management Plans (WRMP) are also produced on a 5-year cycle, with outcomes feeding into our business plans. WRMPs are typically produced taking account of a 50 year horizon in order to secure a resilient water future for customers. Our WRMP forecasts how much water we'll need in the future and proposes a mix of options to make sure we have enough that we then consult on widely. For more information on our WRMP please see: https://www.southernwater.co.uk/about-us/our-plans/water-resources-management-plan/

All water companies now await Ofwat's final determination for 5-yearly business plans. Once published, we will be in a position to confirm strategic infrastructure plans.

Explanatory section on page 210:

We request the following changes to the explanatory narrative regarding Southern Water operations and descriptions of wastewater made on page 210 please, so that in each case the new paragraph reads as shown:

12.1.31 Wastewater that is channelled to wastewater treatment works (WTW) for treatment should include sewage effluent discharged from domestic toilets*. Due to the combined effects of urban creep and climate change, this effluent is increasingly diluted with volumes of rainwater that should not need to be pumped and then treated by WTW.

*excluding all unflushables as per the 3ps here -https://www.southernwater.co.uk/latest-news/fighting-the-unflushables/#:~:text=%E2%80%9CThe%20only%20things%20that%20should,Bag%20it%20and%20Bin%20it.%E2%80%9D&text=Our%20Improvement%3A,Contact%20with%20around%2025%2C000%20customers)

12.1.32 In Medway, Southern Water is the statutory wastewater provider operating and maintaining the assets needed to treat Medway's wastewater and sewage sludge. The principal wastewater treatment works is at Motney Hill, Rainham, Gillingham, which lies to the north west of the Plan area, on the southern side of the Medway estuary. The works include an anaerobic digestion plant where sludges from other wastewater treatment works may be taken for processing. Southern Water also operates a wastewater treatment works at Whitewall Creek near Upnor.

Further explanation and justification:

Whilst some parts of the wastewater network were originally designed to accommodate surface water, the expansion of towns and cities, and 'urban creep', contributes to increases in surface water run-off. As stated in Water UK's 21st Century Drainage Programme; "*The country's built environment is constantly changing and "urban creep" – home extensions, conservatories and paving over front gardens for parking – can all add to the amount of water going into our sewers and drains. Green spaces that would absorb rainwater are covered over by concrete and tarmac that will not. In fact, studies show that "urban creep" results in a larger increase in predicted flooding than new housing, because it adds more rainwater to these systems*'.

As set out in Defra's Storm Overflows Discharge Reduction Plan "Water companies must remove rainwater from the combined sewer system as part of effectually draining their areas. This should include limiting any new connections of surface water to the combined sewer network, and any new connections should be offset by disconnecting a greater volume of surface water elsewhere within the network". This aligns with Southern Water's work to address problems caused by excess surface water in our sewerage network in order to protect water quality in rivers and sea. For more information please see –
https://www.southernwater.co.uk/our-performance/storm-overflows/storm-overflow-task-force and
https://www.southernwater.co.uk/media/7459/stormoverflows_faq.pdf

Even as we deliver this work, development continues to increase surface water run-off. For communities to be resilient to the evolving impacts of climate change into the future, we need planning policy to ensure that development does not increase flood risk elsewhere. Please also see our policy statement on Sustainable Development here:
https://www.southernwater.co.uk/media/ny0nb3qu/our-policy-statement-on-sustainable-development-a4.pdf

We need to ensure that the design of developments will not mean that rainwater continues to run off homes and surfaces so fast that it causes flooding. We also need to protect the quality of public drinking water supplies into the future. To achieve this, planning policy, and the narrative used to explain it, must consistently champion and support 'water smart communities'. We must encourage the attenuation of flows of surface water run-off from rainfall, as well as surface water infiltration into the ground wherever possible in the local environment. We feel that defining rainwater as 'part of wastewater' could result in misunderstanding that would be unhelpful to 'enabling water smart communities'.

Policy T34: Safeguarding of Existing Waste Management Facilities

As the wastewater undertaker for Medway, Southern Water owns and operates wastewater treatment works established within the district. We request the following wording is added to Policy T34, we explain our reasoning further below:

Requested changes:

> *In the case of new odour sensitive development, the agent of change principle applies to the new development and appropriate design and mitigation must be provided in the new development to ensure the ongoing viability of existing surrounding uses is not compromised. Developments in close proximity to existing uses which produce odour should provide an odour assessment in consultation with Southern Water to determine if any mitigating measures are required. If any measures are identified, the applicant must demonstrate how these have been included within the scheme.*

Further explanation and justification:

Southern Water agrees with the policy T34 in general terms. Our concern is that without being more specific, policy T34 may not be effective in mitigating potential impacts to 'sensitive' new development that are referred to in paragraph 12.4.5 of the draft Plan. Any future development built adjacent or near to a WTW, such as housing, could then have an unacceptable impact on the amenity of the site's future occupants arising from the WTW's essential operational activities. Such impacts may include odour as well as noise and vibration.

Paragraph 193 of the NPPF (2023) seeks to ensure that '*existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established,*' while paragraph 191 states that development should be appropriate for its location, and that living conditions of future occupants needs to be taken into account.

Question 44: In light of the geological/spatial constraints in Medway and predicted limited ongoing need, do you agree that it is appropriate for the Council to plan for the management of non-inert waste that may require landfill on the basis that it will be managed at landfill sites located outside Medway? (page 230)

Although as a water and wastewater service provider, we cannot comment on the Council's proposal to plan for non-inert waste to be managed at sites outside of Medway. We note that paragraph 12.8.1 describes the present quantity of non-inert waste and capacity as follows:

> *While non-inert landfill capacity across the South East is declining, the quantity of waste that needs to be disposed of in this way is also declining and this is expected to continue in light of Government initiatives.*

However, as sewage sludge is one form of non-inert waste, we provide some additional information from the wastewater utility sector for your consideration. Although sewage sludge represents only a proportion of the non-inert waste this paragraph discusses, the risk of a decline in available landbank for biosolids is a concern to the sector*. Should an alternative disposal route be required for sewage sludge in the short-term, this could have an impact on the 'declining trends' referred to in paragraph 12.8.1 of the draft Plan.

*For further information please see the following:

- https://www.waterindustryjournal.co.uk/sludge-management-biosolids-recycling - *Biosolids (or treated sewage sludges) typically have two markets – land application and incineration. Application to land, in compliance with the regulatory and good practice requirements, is still considered the best practicable environmental option in most cases. Alongside Spain and France, the UK recycles the majority of biosolids to these markets, with an emphasis on agricultural land.*
- https://utilityweek.co.uk/fear-of-forever-chemicals-could-put-paid-to-biosolids/ - *Today 87% of the UK's treated sewerage sludge is recycled as an agricultural fertiliser and soil improver – the only current disposal outlet alongside land restoration. But wastewater company business plans for PR24 reveal the level of concern over the sustainability of this disposal route from as early as the next asset management period (AMP8). This is due to a raft of regulatory changes looming on the horizon, each with the ability to severely reduce the landbank available for disposal.*
- https://www.water.org.uk/waste-water/extracting-resources-sewage - *We are currently looking at what other opportunities there are to use sewage sludge to ensure that the sector has a sustainable future sludge treatment strategy. Other markets that have the potential to use sewage sludge include construction (as the filler for bricks) and plastics.*

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4th September 2024

Port of London Authority Response to the Medway Regulation 18 Local Plan Consultation

The Port of London Authority (PLA) welcomes the opportunity to comment on the Medway Local Plan Regulation 18 consultation. As a custodian of the tidal Thames, we are committed to ensuring that the river network continues to play a vital role in the economic, environmental, and social well-being of the region. For information, the PLA is the Statutory Harbour Authority for the Tidal Thames, which in the Medway context covers the area from Cliffe pools to Yantlett Creek within the Thames Estuary. Peel Ports are the harbour authority for the River Medway itself and parts of the Thames Estuary, including at Grain and Sheerness. The PLA's statutory functions include responsibility for conservancy, dredging, maintaining the public navigation and controlling vessel movements within its jurisdiction and its consent is required for the carrying out of all works and dredging within its area. The PLA's functions also include the promotion of the use of the River Thames as an important strategic transport corridor. In addition, the PLA also operates a radar navigational tower at Allhallows, which forms is part of a network of 15 radars overseeing the river and estuary which helps to provide a full picture of all shipping movements to and from the river and the outer estuary. We have now had the opportunity to review the updated consultation documents and have the following comments to make.

Economic Growth and Development

We support the Local Plan's vision for economic growth and the revitalization of waterfront sites. The Thames is a crucial artery for trade and commerce, and we believe that sustainable development along the river can significantly contribute to Medway's economic prosperity. We encourage the integration of freight and commercial river transport into the planning framework to reduce road congestion and lower carbon emissions.

Environmental Sustainability

The PLA is dedicated to promoting environmental sustainability. The PLA commends Medway Council for prioritizing the conservation and enhancement of the area's natural assets. The river network and its surrounding environments can provide a key ecological habitat that should be protected and enhanced as a benefit to the region. We support initiatives that protect water quality, air quality, and minimize pollution, ensuring that the river network remains a vital

resource for both wildlife and the community. Where appropriate, we advocate for the inclusion of measures that protect and enhance the river's natural habitats, ensuring that development projects do not compromise the ecological integrity of the river network. The PLA therefore recommends that the Council includes a specific policy or revision to Policy S5 (Securing Strong Green and Blue Infrastructure), on water quality and aquatic habitat health preservation and enhancement to ensure that future development will not harm the river environment. Specifically, there should be reference to the requirement of proposed development to demonstrate that the protection and enhancement of biodiversity includes aquatic and riparian habitats and improved access to nature. There are no adverse impacts on the existing water network, including navigation, biodiversity and water quality.

Transport and Infrastructure

The Tidal Thames offers a unique opportunity for sustainable transport solutions. The PLA urge the inclusion of policies that support the use of the river for passenger and freight transport. Enhancing the river infrastructure can provide a viable alternative to road transport, reducing traffic congestion and contributing to cleaner air in Medway. Water transport is recognised as one of the most sustainable modes for freight movement. The PLA would also be open to take part in any discussions with regard to this on any proposals within the PLA's area of navigational jurisdiction.

The PLA support Policy T21: Riverside Infrastructure, with regard to safeguarding the existing network of Piers, jetties, slipways, steps and stairs to support the use of the river as well as infrastructure associated with transport of minerals and waste. To help protect these safeguarded assets, consideration should be given to the Agent of Change principle (paragraph 193) of the National Planning Policy Framework (NPPF) (2023), which states that existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established, and where the operation of an existing business or facility could have a significant adverse effect on new development in its vicinity, the applicant should to provide suitable mitigation to address these matters.

We also support the recognition of the role of the river network in promoting a strong sense of place and identity, that should be utilised as an important transport corridor for commercial and leisure activities including active travel and passenger transport.

Community and Recreation

The PLA recognise the importance of the use of waterways as a recreational resource for the community, as well as a visual amenity, as referred in the consultation (to include rivers, canals, lakes and reservoirs). Related to this, the Local Plan should consider the potential for developing riverside amenities that provide public access to the river, promoting health and well-being through outdoor activities.

The PLA is committed to promoting active and healthy lifestyles through the design and enhancement of riverfront areas. We support the principles outlined in Policy T27, including improving green and blue infrastructure, expanding walking and cycling routes, and enhancing access to nature.

Policy T20: Riverside Path is welcomed to promote public amenity, walking and cycling alongside waterfront development. In order to strengthen this policy the Local Plan must also include reference to the vital need to provide riparian life saving equipment (such as grab chains, access ladders and life buoys) along the riverside, to a standard as recommended by the PLA's 'A Safer Riverside' guidance for development on and alongside the Tidal Thames (http://pla.co.uk/Safety/Water-Safety/Water-Safety). This would be relevant for all parts of

Medway's' waterways not just the Tidal Thames. The PLA also considers that there is need for suicide prevention measures in appropriate locations (such as CCTV and signage with information to access support) to be provided as part of new development along the riverside. This would be in line with the Tidal Thames Water Safety Forum (which includes the PLA, RNLI and emergency services) Drowning Prevention Strategy (2019). Reference to this essential infrastructure must be included within the policy wording for policy T20.

Policy Map/Allocated Sites

Within the Local Plan, there must continue to be support for the safeguarding of wharfage within the borough, particularly the facility at Cliffe, which is within the PLA's navigational jurisdiction, as reflected in the previous Medway Draft Development Strategy (2018). It appears from the Policy Map – North West, that there is an identified site located in close proximity to the existing wharf operations at Cliffe. We would note that the colouring of the map with overlayed allocations and designations it is not clear, but it is assumed this is an 'indicative preferred site – resi-led'.

As referred above in relation to safeguarded infrastructure, any future proposed development at this site at Cliffe must give close consideration to the Agent of Change principle included in paragraph 193 the NPPF, stating that existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established, and where the operation of an existing business or facility could have a significant adverse effect on new development in its vicinity, the applicant should to provide suitable mitigation to address these matters. This must be referenced within the Local Plan.

I hope you find these comments helpful as you progress the Local Plan. Should you have any queries, please don't hesitate to contact us.

Yours sincerely

Maeliosa Hardy

Planning Consultant

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maidstone.gov.uk
maidstonebc
maidstoneboroughcouncil

Regulation 18 Medway Local Plan Consultation

Medway Council

Gun Wharf, Dock Road

Chatham

Kent, ME4 4TR

Email: planning.policy@medway.gov.uk

5th September 2024

Sent via email.

Dear Sir/Madam,

RE: Medway Local Plan 2041 Regulation 18 Consultation (July 2024)

I refer to the above consultation and wish to make the following representations on behalf of Maidstone Borough Council (MBC).

As you will be aware, MBC has adopted its Local Plan Review 2021-2038 (20 March 2024). MBC has and will continue to work closely and constructively with Medway Council through the duty to cooperate on strategic matters pertinent to the authorities' respective local plans. As such the Council has several comments to make and these are outlined below.

Document structure

It would be appropriate for strategic and non-strategic policies to be identified as per the National Planning Policy Framework (2023) (NPPF) paragraph 19.

The document is also unclear as to the time period for the plan. It is suggested that the plan runs until 2041, but the start date should also be clarified to make sure that the plan is consistent with NPPF paragraph 22 and the requirement for a 15-year timeframe.

Approach to the North Downs National Landscape

The Council is concerned as to the impact of development, to that already planned on the Kent Downs National Landscape. It would like to understand how the inevitable additional recreational and other pressures created will be mitigated. At present there appears to be no mitigations and so the Council is concerned as to the landscape and biodiversity impacts created by development allocations proposed.

Housing Strategy

The plan references that Medway Council will be seeking to meet its own housing need, which is welcomed. However, this may need to be clarified via a policy reference in order for the plan to be consistent with NPPF paragraph 20.

Employment strategy

It is noted that the employment strategy outlined in draft policy S10 'Economic Strategy'. Within this it states that industrial uses should be located to the periphery of the Medway Council area to best use the strategic road network. This policy should reference the Lidsing Garden Community, as it contains a significant employment allocation on M2 junction four, and this is to be a mixed-use employment site.

Retail strategy

The Council is supportive of draft Policy S23: Hempstead Valley District Centre, because of its support in the policy for the role that Hempstead Valley District Centre provides to Lidsing Garden Community.

Infrastructure strategy

Greater clarity should be contained within draft policy S24: Infrastructure Delivery. Specifically in relation to prioritisation and strategy as per NPPF paragraph 20 (b) & (c). Maidstone Borough Council would also like the opportunity to work with Medway Council on identification and delivery of appropriate community, physical and green infrastructure requirements for the plan as per NPPF paragraph 34.

Transport

Within Maidstone's adopted Local Plan Review, Policy LPRSP4(b), requires certain infrastructure improvements to take place to deliver the Lidsing Garden Community allocation. One of the improvements as outlined in Policy LPRSP4(b) criteria 6 (a) is the connection to M2 junction four. A proposed scheme is illustrated in Figure 6.5 of the Maidstone Local Plan Review document. Given that part of the proposed junction improvement works falls within the Medway Council area, it would be appropriate for these highway works and the requisite environmental mitigation to be reflected in the Medway Council Local Plan as a policy, per NPPF paragraph 110 (c).

The Borough Council is also concerned as to the additional traffic pressures placed on the villages of Boxley and Bredhurst and adjacent hamlets through the spatial pattern of growth proposed. Through its own plan the Council has sought to mitigate these pressures and there is further ongoing work through the SPD process for the Lidsing Garden Community site allocation. However, at present this focus appears to be lacking with regards to the spatial strategy promoted by Medway Council. Maidstone Borough Council will continue to work with Medway Council as this work develops.

Evidence base

As per NPPF paragraph 35 (b) the Medway Local Plan 2041 needs to be based on a proportionate evidence base. At present, the aspirations and proposals are not supported by sufficient infrastructure evidence, including a lack of a traditional Infrastructure Delivery Plan. The Council is keen to engage with Medway Council on this due to the cross-border impacts of the potential development strategy outlined.

The Duty to Cooperate

Maidstone Borough Council has and is willing to work with Medway Council as part of the Duty to Cooperate. The Council does have concerns as to the lack of the development of cross-boundary matters and a Statement of Common Ground (SoCG) as per NPPF paragraph 27. As per the NPPF paragraph 24 local planning authorities are under a duty to cooperate on 'strategic matters'; as such Maidstone Borough Council has set out below what it feels are the strategic matters between the authorities:

- Local housing needs
- Gypsy, Traveller & Travelling Showpeople needs
- Affordable housing
- Employment strategy
- Retail strategy
- Kent Downs National Landscapes
- Green infrastructure, Biodiversity Net Gain, networks for nature & wider biodiversity
- Climate change adaptation and mitigation
- Water cycle
- Air quality
- Transport, education, youth and social care infrastructure
- Lidsing Garden Community and associated implications

Whilst the Council notes that the Duty to Cooperate does not mean that we have a duty to agree, MBC looks forward to working with Medway Council at a political and officer level as you progress with your Local Plan.

The Policies Map

It is acknowledged that the policies map is still in development. Specifically, Maidstone Borough Council would like to comment on the following draft allocations: LW8, HW5, HW6 & HW11. At present, it is hard to assess the impacts of these draft allocations as no detail of their specific use or capacity has been provided. We look forward to working with Medway Council as these allocations are developed to understand the impacts of these sites on Maidstone Borough and how they could be reflected in the emerging work on the Lidsing Garden Community SPD.

Site HW5 Hempstead Valley Shopping Centre is listed on the policies map as a residential led development which seems to contradict draft Policy S23: Hempstead Valley District Centre. This should be clarified.

Lidsing Garden Community

Maidstone Borough Council is currently in the process of developing a Supplementary Planning Document for the Lidsing Garden Community as required by the adopted Maidstone Local Plan Review 2021-2038 Policy LPRSP4(B). The Council would like to continue the good cooperation that has started on this project as the work progresses, so that this document can be adopted by it as soon as possible to support sustainable growth, community building and environmental excellence in this part of the Borough.

Yours sincerely,

Cllr Harwood

Cabinet Member for Planning Policy & Management

Date: 06 September 2024
Our ref: 482162
Your ref: -

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Planning Policy
Medway Council

By email only, no hard copy to follow
planning.policy@medway.gov.uk

Dear [redacted]

Medway Local Plan 2041
Regulation 18 Consultation, July 2024

Thank you for your email of the 12 July 2024 seeking Natural England's advice on the Medway Local Plan 2041 Regulation 18 consultation and associated documents which we are pleased to provide.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Natural England is pleased to provide our detailed advice on the Regulation 18 consultation for the Medway Local Plan in Annex A appended to this letter and we hope these comments are helpful. We look forward to continuing our collaborative approach with the Council working towards our shared ambition of securing a sound local plan which delivers the social and economic benefits whilst conserving and enhancing the rich natural environment within Medway for current and future residents.

If you have any queries relating to the advice in this letter, please contact me by telephone on [redacted] or by email to [redacted]

Sean Hanna
Senior Officer
Sussex and Kent Area Team

Annex A: Natural England's detailed comments in relation to the Medway Local Plan 2014 Regulation 19 consultation

Natural England's detailed comments on the Local Plan consultation and associated documents are provided in the following sections. We have prioritised the provision of our comments on environmental matters within Natural England's remit and the absence of comments on a particular policy, allocation or supporting document reflects this need to focus our advice.

1 Medway Local Plan

Overarching comments

1.1 Natural England welcomes the opportunity to provide comments on the Regulation 18 consultation and have provided comments on specific sections below. An overarching observation we have is that some of the policies have wording along the lines of 'having regard to other relevant policies within the Plan' whilst others do not. Our understanding is that develop management proposals will need to be considered against all relevant policies within an adopted Local Plan and this wording has the potential to cause confusion given this approach is not consistent throughout the draft Plan. It would be helpful for clarity to be provided as the Plan progresses.

Vision

1.2 Natural England welcomes and supports the amendments to the wording of the Vision following our previous comments in our letter of the 31 October 2023 (our reference 450953) bringing the value of the rich environmental and cultural assets of Medway and the social and economic benefits that they support to the fore.

Strategic objectives

1.3 Natural England broadly supports the strategic objectives within Section 2.2 but would welcome further clarity being provided in relation to conservation and enhancement of the natural environment and infrastructure delivery.

1.4 The third bullet point under the 'Prepared for a sustainable and green future' heading has the potential to imply that only environmental assets of international and national importance will be conserved and enhanced (although this is clarified elsewhere in the consultation Plan). Medway has a rich and diverse natural heritage supporting local wildlife sites, significant areas of habitats of principal importance along with populations of protected species and species of conservation value. Natural England would support the objective being broadened to ensure that Medway's rich environmental assets are conserved and enhanced which would more closely align the objective with Paragraph 185 of the National Planning Policy Framework.

1.5 Natural England would support the broadening of the first point under the 'Boost pride in Medway through quality and resilient development' to ensure that the 'timely provision of good quality effective infrastructure' delivers the green blue and grey infrastructure required to support Medway's growth and the wider benefits for its residents.

Spatial development strategy

1.6 Natural England broadly supports the spatial strategy (Section 2.3) and welcomes the commitment to conserve and enhance designated and non-designated areas of habitat along with the network of green and blue infrastructure to benefit wildlife and people. We would encourage the spatial strategy to be bolder in its aspiration to ensure that it helps to deliver the multiple benefits that well designed green and blue infrastructure can deliver to existing residential and urban areas where there is currently a deficit of high quality, accessible greenspace; providing green corridors or stepping stones in existing urban areas

will help deliver urban nature recovery, health and wellbeing benefits for people and climate change adaptation. Small scale development allocations in existing urban settlements could help achieve this and the Green Infrastructure Standards[1] and associated mapping tool may be helpful in achieving this.

1.7 It may also be appropriate to reference how the spatial development strategy will contribute to the Local Nature Recovery Strategy within the third paragraph.

Spatial growth options

1.8 Natural England notes the three potential growth options within the consultation; our advice remains that the development allocations which avoid or have the least environmental impact (and where mitigation measures will be fully effective) should proceed to allocation. We have previously provided our comments on the preferred allocations in our email of the 10 May 2024 and have not repeated in this response.

Draft policy wording

Planning for climate change

1.9 Within the 'Effective spatial planning and placemaking' section of Policy S1, Natural England would support the inclusion of an additional bullet point on directing development to areas which help future proof the development to strengthen the policy. Sea level rise, coastal squeeze and surface water flooding are all key planning considerations, and we would recommend these are included. We have suggested some wording below which may be helpful to include within this section:

> 'Directing the spatial strategy for growth to locations which avoid, or minimise, the need for additional engineered flooding solutions and allow nature based solutions for coastal and surface water flooding to help build resilience to the effects of climate change'

1.10 Natural England supports the inclusion of nature based solutions within the 'Adaptation to climate change' section of Policy S1 but would support the inclusion of blue infrastructure in playing a key role to helping mitigate the effects of climate change by amending the text along the following lines '…multifunctional green and blue infrastructure to enhance…'.

Conservation and enhancement of the natural environment

1.11 Natural England welcomes and supports the Council's vision over the plan period to conserve and strengthen Medway's important wildlife sites and wider nature networks (Section 4.3.6).

1.12 Natural England welcomes the broad aspirations within Policy S2: Conservation and enhancement of the natural environment. We feel that the wording would benefit from being strengthened to ensure that all of Medway's rich and diverse environmental assets (including statutory and non-statutory designated sites, priority habitats and species and protected species) are conserved and enhanced through the Local Plan. At present, the first paragraph of Policy S2 suggests that such an approach applies to priority habitats and species only. Broadening the wording to cover all biodiversity assets within Medway would more closely reflect the avoid, mitigate, compensate hierarchy and wider requirements within Paragraph 186 of the NPPF.

1.13 In addition, whilst we support the broad principles within Policy S2 we feel it would be helpful, as the plan evolves, for a greater degree of clarity to be provided as to how development proposals coming forward will be considered. Clear 'tests' within the wording will help to ensure developments which meet the Council's strong objective of conserving

[1] https://designatedsites.naturalengland.org.uk/GreenInfrastructure/Home.aspx

and strengthening Medway's wildlife assets can be consented. We will be pleased to work with the Council on wording as the Plan progresses if this would be helpful.

Sites of international importance for nature conservation

1.14 Natural England acknowledges and supports the leading role that Medway Council has taken in the implementation of the Thames, Medway and Swale Estuaries Strategic Access Management and Monitoring Strategy (SAMMS) implemented by Bird Wise North Kent.

1.15 Natural England's advice remains that the strategic approach to managing recreational impacts from new housing to the coastal sites is appropriate. The monitoring to date, suggests that the measures are effective in managing recreational disturbance impacts. Our advice is that, subject to the appropriate financial contribution, an adverse effect on integrity to the coastal SPAs and Ramsar sites can be ruled out for developments that are within the zone of influence (with the exception of large-scale housing development in close proximity to the designated sites). With further housing growth proposed across the north Kent local authorities, additional mitigation (for example, in the form of a greater number of wardens) may be required during the lifetime of the Medway Local Plan and we recommend be reflected within the Plan and the accompanying Habitats Regulations Assessment.

1.16 For large residential developments near the designated sites, additional bespoke mitigation measures are likely to be required. Such measures could include provision of site-specific wardens and on-site green space provision, for example, in addition to the financial contribution as part of a SAMMS+ approach. Natural England supports this approach and wording within Policy S3.

1.17 Whilst Policy S3 relates to the consideration of recreational impacts to the coastal designated sites, other impacts from developments to these (and other sites) may result from the Plan. Such impacts could result from water quality and quantity, noise and air quality impacts (for example). To help avoid any confusion that the only impacts to the coastal sites that needs to be considered is recreational disturbance, it would seem appropriate to provide clarity, either in Policy S3 or an amended Policy S2 and we will be please to work with the Council on this if that would be helpful.

Landscape protection and enhancement

1.18 Natural England welcomes the Council's commitment to directing development towards areas of lower landscape sensitivity (as detailed within Policy S4: Landscape protection and enhancement).

Securing strong green and blue infrastructure

1.19 Natural England welcomes and supports the Council's approach to ensuring that green and blue infrastructure, and the multiple benefits for people, nature and landscape and the broader environmental resilience it delivers, are at the heart of the Local Plan.

1.20 We welcome and support the commitment within Policy S5 to maximise the opportunities for the retrofitting of green infrastructure to existing urban areas as part of a coherent network. Such an approach is key to helping deliver benefits to existing communities, helping to provide climate change adaptation and facilitate urban nature recovery.

1.21 As with Policy S2, we would recommend that as the plan evolves, the wording of Policy S5 should set out clear policy wording which developments will need to demonstrate they meet to ensure that the existing green and blue infrastructure network is conserved and enhanced with new developments maximising the opportunities for connection and expansion of the network. We support the use of the Green Infrastructure Framework and would encourage

the Council to commit to striving to achieve the Green Infrastructure Standards[2] for new and existing developments. For strategic allocations, green infrastructure should be fully integrated into the masterplan, with corridors for people and wildlife to permeate throughout the developments.

Kent Downs National Landscape

1.22 Natural England welcomes the consideration of direct and indirect impacts to the Kent Downs National Landscape and its setting from the Local Plan and would support the requirement for developments within, or in the setting, to be accompanied by a landscape and visual impact assessment being included within the Policy wording.

1.23 In addition to the requirement for strengthened policy wording to guide developments and their design, in accordance with the requirements of the NPPF, we recommend that Policy S6 includes reference to the amendments to Section 85 of the Countryside and Rights of Way Act 2000 introduced by Section 245 of the Levelling Up and Regeneration Act 2023. This details that:

> 'In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England, a relevant authority other than a devolved Welsh authority must seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty'.

Flood and water management

1.24 Natural England welcomes reference to the Thames Estuary Plan (TE2100) and Medway Estuary and Swale Strategy (MEASS) within Section 4.8 of the plan. We support the approach within Section 4.8.4 of the consultation document to ensure site policies reduce the causes and impacts of flooding.

We also support the commitment to 'allocate land to safeguard it for flood risk management infrastructure'. Natural England would support this commitment including the requirement to safeguard areas for compensation/habitat creation that enable flood risk management measures to proceed while ensuring the protection of important habitats under the TE2100 and MEASS strategies.

1.25 Natural England welcomes the inclusion, within Policy DM1, that the Plan recognises the legal requirements under the Conservation of Habitats and Species Regulations to provide compensatory habitat associated with sea level rise and coastal squeeze. In addition to the compensatory intertidal habitat provision, measures to compensate for freshwater habitats will be required where realignments to the coast or defences aren't maintained and these result in impacts to freshwater habitats. Natural England would support the consideration of these measures alongside the Local Nature Recovery Strategy and Medway Green and Blue Infrastructure Strategy to maximise habitat linkages and opportunities.

1.26 Natural England welcomes the commitment within Policy DM1 to use nature-based solutions (multi-functional green and blue infrastructure and integrated sustainable drainage systems which maximise their biodiversity and wider environmental value) as part of the measures to help Medway adapt to the effects of climate change from flooding, water quality and water availability.

Air quality

1.27 Natural England supports the requirement within Policy DM3 that developments with the potential to result in air quality impacts to designated sites will need to avoid or fully mitigate these impacts. We will be pleased to provide further advice on any air quality implications of

[2] https://designatedsites.naturalengland.org.uk/GreenInfrastructure/GIStandards.aspx

the Plan when the air quality assessment to support the Habitats Regulations Assessment are available.

Noise and light pollution

1.28 Natural England welcomes the commitment within Policy DM4 to ensure that noise and lighting impacts to ecological and landscape receptors do not result from the Plan. In addition to the avoidance of impacts to designated nature conservation sites from noise and lighting within the three bullet points of the Policy wording, we would recommend that the Kent Downs National Landscape is included. A sense of remoteness, including dark skies and tranquillity, are key components of the special qualities of the National Landscape and developments within the Kent Downs, or its setting, should be designed to avoid or fully mitigate such impacts.

1.29 We would also recommend that the requirement for noise and light contour plans to be submitted with development proposals where impacts to the Kent Downs and/or designated sites may result is included within Policy DM4. These are key tools to allow a robust assessment of the potential impacts and effectiveness of any mitigation measures proposed.

Houseboats

1.30 Natural England welcomes the commitment within Policy T7 that 'potential developments will only be supported where there are no adverse environmental impacts upon the health of the designated marine and supporting habitats of the estuaries and rivers'.

2 Interim Habitats Regulations Assessment

Overarching comments

2.1 Natural England acknowledge that the Habitats Regulations Assessment is an iterative document with much of the detailed assessment to be provided as the Local Plan progresses towards submission. We have provided some comments below which we hope are helpful to guide future iterations of the Assessment.

Scoping threats and pressures

2.2 Natural England agree, based upon the currently available information, that the sites contained within Section 3.4.1 of the interim assessment appear appropriate.

We would however recommend that all features of the sites are considered as part of the Habitats Regulations Assessment. For example, the report, at present, appears to focus mainly on the wintering and breeding birds and supporting habitat associated with the Thames Estuary and Marshes, the Medway Estuary and Marshes and The Swale Special Protection Areas (SPAs) and Ramsar sites. These Ramsar sites are also internationally important for their wetland plants and invertebrates; given this we would recommend that the Habitats Regulations Assessment includes consideration of all species and habitats within the designated sites.

Air quality

2.3 Natural England concurs with the conclusion that Queendown Warren Special Area of Conservation (SAC) is unlikely to be impacted by transport generated air quality impacts as it does not appear to fall within 200metres of a road likely to be affected by the Local Plan. In addition, our advice remains that Peter's Pit (SAC) is not a site that is sensitive to changes in transport generated air quality impacts.

2.4 We note, as detailed in Section 3.5.9 of the Interim Habitats Assessment that traffic modelling data (and any subsequent air quality assessment) is not currently available. We will be pleased to provide further advice on any air quality impacts at the Regulation 19 stage, or earlier if the data is available to share. The Habitats Regulations Assessment will need to consider both transport and wider development related (for example, those resulting from any industrial development allocations) air quality emissions. Our advice remains that the air quality assessment should consider potential impacts arising from eutrophication (nitrogen), acidification (nitrogen and sulphur) and direct toxicity (ozone, ammonia and nitrogen oxides) as detailed in the Interim Assessment.

Water quality and water quantity

2.5 Natural England welcomes consideration of potential impacts to designated sites from both water quality and quantity through the Habitats Regulations Assessment and the site identified within Section 3.6.

2.6 Natural England concurs with the recommendations within Table 3.3: Review of hydrological impact pathways to European sites within the influence of the Medway Local Plan that impacts to the Quendown Warren SAC are unlikely to result from water quality of quantity. Whilst we acknowledge that the majority of the ponds within Peter's Pit SAC are raid fed, it may be appropriate for further clarity to be provided to demonstrate that water availability will not impact the site.

Recreational pressure

2.7 Natural England broadly agree that the sites detailed within Section 3.7 of the Interim Assessment appear appropriate for consideration of impacts resulting from recreational

disturbance. We would however recommend that, at this stage, The Swale SPA and Ramsar site is considered as part of the Habitats Regulations Assessment. Whilst Medway lies outside the core zone of influence for the coastal SPAs and Ramsar sites, based upon the Thames, Medway and Swale Estuaries Strategic Access Management and Monitoring Strategy, significant developments (including allocations) within 6-10 kilometres of the sites should be considered on a case-by-case basis. As such, we would recommend that The Swale SPA and Ramsar site is currently screened in, and further consideration provided at the Regulation 19 stage of the Local Plan once the preferred site allocations are confirmed if any of these are within the 6-10 kilometre zone.

Urbanising effects

2.8 Natural England welcomes consideration of potential urbanising effects to the designated sites within the Interim Habitats Regulations Assessment along with direct and indirect impacts to habitat out with the designations, but which supports qualifying species (functionally linked land).

2.9 Whilst the 'TIDE Toolkit' referenced within Section 3.8.3 of the Interim Assessment provides some useful advice on waterbird disturbance, these need to be site and species specific. Small increases in urbanising effects in locations which currently experience lower levels of disturbance or noise, or areas supporting more sensitive species, for example, could result in a likely significant effect and these should be considered within the Habitats Regulations Assessment.

2.10 We note that 400metres has been used as a zone for urbanising impacts (Section 3.8.1) which appears to be largely based upon recreational impacts rather than the broader suite of urbanising effects. Whilst 400 metres may be an appropriate distance for some urbanising effects, impacts to functionally linked land for mobile species including birds associated with the coastal SPAs and Ramsar sites are known to extend significantly beyond 400 metres in north Kent. Given this, we would recommend that the next iteration of the Habitats Regulations Assessment provides a robust, evidence-based assessment of urbanising effects to the designated sites, including impacts to functionally linked land.

Coastal squeeze

2.11 Natural England notes that the Interim Habitats Regulations Assessment has considered potential allocations in relation to required compensatory habitat detailed within the Medway Estuary and Swale Flood and Coastal Risk Management Strategy (MEASS). It would also appear appropriate for the Habitats Regulations Assessment to consider whether any other allocations have the potential for impacts to coastal sites through the need for additional coastal defences, for example, in addition to any impacts to the existing compensatory areas identified.

Appropriate Assessment

2.12 Natural England notes that the screening conclusions within the Interim Habitats Regulations Assessment will be revisited as the plan progresses (Section 9.1.2) and that an Appropriate Assessment will be undertaken at the Regulation 19 stage of the Medway Local Plan. We will be pleased to provide input and advice as the plan and Appropriate Assessment evolve.

Appendix B: Policies screening summary to inform test of likely significant effect

2.13 Whilst Natural England largely concurs with the information provided in Appendix B, as the policies and plan evolve, we would recommend that the screening summary is revisited as part of the iterative Habitats Regulations Assessment.

Appendix C: Indicative preferred sites screening summary

2.14 Given the comments above, we have not provided comments on the summaries for individual sites within Appendix C of the interim assessment; we will of course be pleased to provide further advice as the plan progresses and the Habitats Regulations Assessment is updated.

3 Interim Sustainability Appraisal

Overarching comments

3.1 Natural England acknowledges that the Sustainability Appraisal is an iterative document and broadly welcomes the approach taken and the limitations associated with assessing the development options. Under SA Objective 5 (Pollution and waste), it would appear appropriate to consider the air quality impacts to ecological as well as human health receptors resulting from the Medway Local Plan in future iterations of the Sustainability Appraisal.

3.2 Natural England's advice remains that development allocations which progress to the Regulation 19 stage should be those with the least environmental impact (and where impacts cannot be avoided, they should be capable of being mitigated) and the Sustainability Appraisal is an important tool to support this.

3.3 In accordance with the 'avoid, mitigate, compensate' hierarchy within Paragraph 186(a) of the National Planning Policy Framework, allocations which avoid all direct and indirect impacts or those which can fully mitigate their impacts should proceed to in preference to those where compensatory measures are required. Key to this will be a robust avoidance and mitigation strategy for developments where impacts to designated sites, protected landscapes and areas of high biodiversity value. We recommend that the Cumulative Ecological Impact Assessment and the associated Strategic Approach for Chattenden Woods and Lodge Hill Site of Special Scientific Interest are finalised to provide a robust evidence base to inform the allocations which proceed.

SA Objective 3 Biodiversity

3.4 Natural England notes that residential allocations at Cliffe and Cliffe Woods, the Hoo Peninsula and Capstone Valley and all of the employment sites are assessed as having a significant negative impact when considered against SA Objective 3. For allocations near designated sites, we would recommend that further consideration of ways to ensure impacts are avoided or fully mitigated is undertaken before the Regulation 19 stage of the Medway Local Plan. This is key to ensuring that the allocations and Plan meets the tests of soundness.

We would welcome and support the use of the Cumulative Ecological Impact Assessment work that the Council commissioned and the more detailed, site specific work for developments around the Chattenden Woods and Lodge Hill Site of Special Scientific Interest to inform the allocations and the avoidance and mitigation measures that should be embedded within the Plan.

SA Objective 4 – Landscape and townscape

3.5 Development allocations within or within the setting of the Kent Downs National Landscape have the potential to result in significant landscape and visual impacts. We welcome the weighting given to the Kent Downs National Landscape within the SA and would recommend that allocations which avoid impacts to the Kent Downs National Landscape proceed to allocation.

SA Objective 5 - Pollution and waste

3.6 As mentioned above, it is unclear whether ecological receptors have been considered within the SA Objective 5 alongside human receptors and it would be helpful for clarity to be provided.

SA Objective 6 – Natural Resources

3.7 Natural England notes that most of the spatial development options are likely to result in the loss of best and most versatile agricultural soils. Natural England's advice remains that, where impacts to agricultural soils cannot be avoided through the Local Plan, allocations which impact lower grade soils should be prioritised to those of a higher quality, where this meets all of the other policy requirements. Such an approach is in accordance with the National Planning Policy Framework.

Chapter 8 Mitigation

3.8 Natural England notes that for many of the Sustainability Objectives relevant to the natural environment, the Sustainability Appraisal concludes that 'these policies are not expected to fully mitigate' the impacts of the Plan. Natural England therefore recommends that the Policies and allocations are reviewed to ensure that impacts can be fully avoided as the Plan progresses to Regulation 19 to ensure that the tests of soundness can be fully met.

Recommendations

3.9 We support the recommendations within Table 9.1 of the Sustainability Appraisal for additional/amended policy wording which will help ensure that impacts are avoided, and the Plan meets the tests of soundness and achieves the vision for Medway.

3.10 In addition to the recommendations with the Sustainability Appraisal and our advice above in relation to specific policies, Natural England would support the following additional elements being included within the policy wording:

- The inclusion of detailed masterplans for strategic allocations to guide developments and ensure that green infrastructure corridors are fully integrated within the developments;
- A commitment to ensuring that the Plan will work to achieve the requirements within the Green Infrastructure Standards for developments;
- Referencing the Cumulative Ecological Impact Assessments commissioned by the Council and including their recommendations to ensure that impacts can be avoided or fully mitigated; and
- Referencing the enhanced Section 85 of the Countryside and Rights of Way Act landscape duty in relation to the Kent Downs National Landscape.

4 Site allocations

4.1 Natural England has previously provided high-level comments on the preferred allocations in our email of the 10 May 2024 and these comments remain appropriate and are not repeated in this response. Natural England's advice remains that allocations which avoid or fully mitigate their impacts to the rich environmental assets within Medway should proceed to allocation in preference to those were impacts cannot be mitigated.

4.2 Natural England notes that several residential allocations are included around the Chattenden Woods and Lodge Hill Site of Special Scientific Interest. Our advice remains that, should these development allocations proceed, a strategic approach to ensuring that impacts from developments to the important habitats and population of nightingales are avoided or fully mitigated needs to be secured. The Local Plan should provide clarity on the avoidance and mitigation measures that will be implemented through the strategic approach.

4.3 We continue to support the Council's good practice approach in preparing the Cumulative Ecological Impact Assessment to inform such a strategic approach. As discussed previously, we feel that it is important for the proposed mitigation measures detailed within the draft Cumulative Assessment to be robustly tested to inform and finalise the strategic approach. We would recommend that the strategic approach, once agreed, should be used to screen the local plan allocations before proceeding to the Regulation 19 stage. This will help provide the required degree of certainty that all confirmed development allocations provide a robust and effective suite of measures that will be implemented.

4.4 Natural England recommend that the, once agreed, the strategic approach should also be referenced within the Local Plan policy to ensure that there are clear criteria which developments around the SSSI will need to meet. We will of course be pleased to continue working with the Council on the strategic approach in the coming months.

Thank you for providing Swale Borough Council the opportunity to respond to your Regulation 18 consultation.

In your consultation you have cited a figure of 1,658 dwellings to be built each year, with a total of nearly 28,000 homes to be built between now and 2041. The current annual local housing need for Swale under the Government Standard Method of calculation is 1,040 dwellings (potentially going up to 1,061 under the latest NPPF consultation).

Regarding the three spatial options set out in your Regulation 18 consultation. All three options propose development along the eastern border of Medway that abuts the border of Swale. In all three growth options the heat maps provided show high levels of development in this area, especially growth option SGO 2 and SGO 3 (your preferred option). However, actual quantums of development of this area or for specific sites have not been provided and neither has site specific policies, making it difficult to provide detailed comments on the potential for development at this stage. Further, there is no information on what the types of non residential use will be, making the ability to comment on proposed uses along the Medway Swale border limited. For example are the non residential uses near the Swale Border for logistics or warehouse use that in turn would have significant impacts through increasing the number of large lorries using the A2 corridor.

Swale has concerns over the potential levels of development and regeneration indicated along the Medway/Swale border. Our concerns specifically focus on the potential for congestion along the A2, a road that already has historic congestion and capacity issues, along Newington High Street via building works and the increase in receptors in Rainham after the development. Swale are also concerned about the potential levels of traffic increase from proposed development in Medway and its impacts along the A249 an important road that connects northern and central Swale with the wider Kent region. As part of developing the Local Plans for Medway and Swale our transport modelling through our consultants Jacobs should ensure that all sites for both authorities are assessed together specifically along our borders and be considerate of impacts on the wider strategic network.

With the likelihood of increased congestion through the indicated scales of development there will also be air quality issues. Swale brings to your attention the need to ensure that AQMAs are relevant and up to date and that there is presently AQMAs on Newington High Street, Rainham High Street and Key Street roundabout. Therefore both authorities should work collaboratively together to mitigate against both potential increases in traffic congestion and air pollution. The importance of this work is set out in the Environment Act 2021 that proposes a reduction of exposure to PM2.5 by over a third compared to 2018 levels.

In a similar context once Medway is in a position to confirm its preferred growth approach and sites for allocation, Swale would look for early and continued engagement on the impacts on the strategic road network and appropriate mitigation. Specifically, with regards to the impacts on the M2 due to the high levels of proposed development indicated along Medway's southern boundary. This consideration should also include the high levels of development in the area from the Maidstone Borough Council Local Plan adopted this year. As part of early and continued engagement, both Medway and Swale should share information working with Kent County Council and others strategic road network bodies to evidence our Local Plans.

According to your Regulation 18 document, Rainham is also due to see significant regeneration with the likes of improvements in connectivity by way of cycle links, green spaces and Wi-Fi . Rainham has also been made a preferred location for self-build. As Medway's Local Plan drafting progresses Swale would welcome opportunities to engage with cross boundary opportunities on these matters.

Expanding on this, Swale believes the plan making duty to cooperate also gives an opportunity to work towards improving green and blue infrastructure. The north Kent coast is home to the Medway and Swale estuaries and marshes which overlap the borders of the two authorities. This area covers both flood plain and high levels of bio diversity being both part of the Environment Agency's Medway Estuary and Swale and Thames Estuary 2010 programmes, and are protected under international designations such as Special Protection Areas (SPAs) and Ramsar sites. Cooperation can be valuable to ensure the conservation and protection of these areas as well as improving green and blue infrastructure.

We would also welcome the opportunity to work towards understanding future education provision foreseen in Medway. Both parties should share information and engage on education infrastructure requirements and include working with KCC.

Swale Borough Council looks forward to early and continued engagement on Medway's Local Plan as drafting progresses through the duty to cooperate. Also, the members of Swale Borough Council would like to be briefed by Medway on your draft Local Plan once it is ready for consultation.

NHS
Kent and Medway

Directorate of Corporate Governance
NHS Kent and Medway Integrated Care Board

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6 September 2024

Planning Policy Team
Medway Council
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Chatham,
Kent,
ME4 4TR

Dear Planning Policy Team

NHS Kent and Medway – Response to Medway Local Plan Regulation 18 Consultation

NHS Kent and Medway is the NHS organisation that plans and buys healthcare services to meet the needs of 1.9 million people living in Kent and Medway. It is our responsibility to ensure health services and all future proposed developments are sustainable from a revenue affordability, capital investment and workforce perspective. We must also ensure that, wherever possible, we maximise the delivery of care closer to where people live.

NHS Kent and Medway Integrated Care System brings partnership organisations together to plan and deliver joined up health and care services to improve the lives of people across Kent and Medway. Within the Integrated Care System there are place-based partnerships, referred to as Health and Care Partnerships (HCP) that bring together the providers of health and care services, along with other key local partners, including local councils, to work together to plan and deliver care.

NHS Kent and Medway and the East Kent Health and Care Partnership (HCP) have reviewed Medway's Local Plan and wish to submit the following comments.

What are the key issues you want the plan to address, and how?
What are the most important issues for you in planning new developments?
Do you have any comments on the wider plan?

We understand a key aspect of the consultation is the consideration of spatial growth options and an indicative spatial strategy for where development could take place over the plan period and note that Option 3 is Medway Council's indicative preferred option.

NHS Kent and Medway has considered option 3 in making our response but note that this growth option is indicative and may change before the plan is finalised. Our assessment and

considerations are therefore high level at this stage and will be further defined as the plan is developed. We will continue to work with Medway Council and provide additional information as part of our ongoing work on infrastructure planning.

At a high level, the potential 28,000 new homes in the period to 2041 will result in an estimated 62,000 new population impact (this includes application of an internal migration factor) on primary, community, acute and mental health services.

This is likely to result in an overall additional capital cost required by the healthcare system arising from new housing in Medway to 2041 of £124 million; it must however be stressed at this stage that this is an indicative high level analysis and not a fully informed assessment (i.e. actual tenure, type and size of homes coming forward) at locality level given the indicative and high level nature of the information provided.

The key issues NHS Kent and Medway would like the plan to address are:

- Timely delivery of additional strategic healthcare infrastructure (on site) in identified areas arising from strategic assessment of the growth strategy. Infrastructure provided in this way should be transferred to the NHS at nil consideration.

- Where strategic development areas exist, confirmation of how a master planning approach would support timely delivery of land and contributions for healthcare to ensure capacity available through new infrastructure (on site) at an early/agreed point in the development. Infrastructure provided in this way should be transferred to the NHS at nil consideration.

- Timely availability of S106 contributions to support expansion/upgrade of existing (off-site) healthcare facilities in line with the healthcare estates strategy.

- To ensure the cumulative impact of development arising from Medway Council's plan and neighbouring authority plans is fully considered and mitigated for healthcare.

Additional healthcare infrastructure will be required as a result of the proposed growth to support delivery of healthcare, including integrated primary and community healthcare, in line with the Medway and Swale HCP Estates Strategy. The following key points should be noted from our initial assessment:

- Medway has some of the best community health care facilities in the Healthy Living Centres and whilst work is required to increase utilisation of these, the proposed growth would far exceed current capacity. This would include the new Healthy Living Centre in Chatham. Further detailed assessments will be required to define requirements in each locality.

- The Peninsula and Strood do not currently have community health facilities (i.e Healthy Living Centres); further detailed assessments will be required to define requirements in these localities.
- From a healthcare perspective, any development in the Lordswood and Hempstead areas will need to be strategically assessed alongside the proposed development in Lidsing in the Maidstone Borough Council area.

- Through the One Public Estate agenda, and where appropriate, NHS Kent and Medway would wish to explore the potential to co-locate health and care services in the

community, with other appropriate services and facilities that improve population health and well-being. This includes review of existing facilities regardless of whether these are owned/leased by the NHS or other agencies; extension of existing facilities where appropriate and the construction of new joint facilities where this is warranted.

- Acute services are currently provided from Medway NHS Foundation Trust, at Medway Maritime Hospital in Gillingham. Much of the infrastructure on the existing site is antiquated and not fit for 21st Century delivery of modern healthcare services. Services are currently stretched and an increase in the local population of 62,000 will not be able to be accommodated within the existing infrastructure. A key strand underpinning the Trust's clinical and estates strategies is a fully integrated development control plan which aims to enhance site access and connectivity, both internally and externally. There are a number of services on the acute site which do not need to be there and as part of the Trust strategy, plans will be developed to deliver these in the community, freeing up space on the acute site. This will require major capital and revenue investment – central government investment to address the needs of the current population and significant capital investment from developers to meet the needs of the new population.

Policy S24: Infrastructure Delivery

NHS Kent and Medway broadly supports the principles set out in Policy S24 with the following specific comments:

- With regards to the sequencing of infrastructure delivery, we would highlight the importance for healthcare of financial developer contributions for off-site provision being available at the earliest opportunity to support mitigation of the growth on existing facilities.
- NHS Kent and Medway will be publishing a Developer Contribution Guide in Autumn 2024 and request the Medway Guide to Developer Contributions is updated to reflect this.
- NHS Kent and Medway would expect applications to be refused if the developer is unable to mitigate the health impacts.

Policy T27: Reducing Health Inequalities and Supporting Health and Wellbeing

NHS Kent and Medway supports the policy and specially the need for development to satisfy the following:

- *Major development will be permitted where it provides facilities and services that support health objectives with priority given to new or enhanced existing health, social care, community, sport, and leisure facilities.*
- *Major development must ensure that primary health care facilities provided are of an appropriate scale in relation to the proposal and meets the needs of residents. These primary health care facilities must be located alongside other community services and facilities to foster a sense of community, improve accessibility, promote sustainable travel, and enable combined trips.*

As development will place pressure on all health care services and infrastructure, not just primary healthcare; the intention is for integrated healthcare provision to be considered for new facilities as part of future planning. It is therefore requested that "primary" be removed from Policy T27 to ensure this reflects the NHS integrated healthcare planning intention.

Letter reference: SBC 24/502123 - MG

Key points to support the above comments:

Healthcare Estates Strategy

- Local health and care providers in Medway and Swale, in collaboration with the NHS, local government, and the voluntary sector, are addressing significant health and wellbeing challenges. These challenges, influenced by health inequalities, a growing and increasingly elderly population and other social and economic issues, reflect broader trends seen across Kent and Medway and nationally. The aim is to understand and meet the population's health and care demands through a comprehensive local estates strategy that adapts to current and future needs, recognising dynamic and ever-changing societal, clinical and technological advancements. The Medway and Swale Interim Estates Strategy is one of four across Kent and Medway, all of which have a clear relationship with the overarching NHS Kent and Medway Strategic Estates Plan. This is the first time that such strategies have existed. They have been developed alongside, and informed by, local authority estates and development plans. They recognise the critical relationship required between health and care services and local authorities to ensure high quality, affordable, efficient, fit for purpose and sustainable infrastructure is in place to meet the needs of local people.

- The estates strategy focuses on optimising property assets to support strategic health objectives, ensuring they are suitable, efficient, and sustainable. This involves regular reviews to align with the Medway and Swale Health and Care Partnership's (HaCP) goals and the broader NHS Kent and Medway Integrated Care Board's ("The ICB") objectives.

- The Health and Care Partnership Estates Strategy aims to enable the delivery of high-quality care and support in suitable facilities, enhancing residents' experiences. By understanding population health information, clinical and care strategies, local population need, and the condition of our infrastructure, we can prioritise and coordinate estate priorities accordingly. The estates strategy aims to improve health outcomes by collaboratively committing to actions, whilst recognising varying and competing requirements, particularly in relation to capital and revenue financing, including developer contributions.

- The estates strategy for Medway and Swale outlines utilisation of the four existing Healthy Living Centres across Medway. The healthy living centres currently host a variety of primary, community and diagnostic services situated in Medway. These facilities were established and built through the NHS LIFT programme, a collaboration between public and private sectors, and were initiated during the life of Primary Care Trusts, to enhance primary and community care facilities. The healthy living centres are Lordswood, Rochester, Rainham and Balmoral Gardens in Gillingham.

- A fifth Healthy Living Centre has recently been approved in the Pentagon Centre in Chatham. This new £15m development builds on the Health in the High Street model and will provide purpose-built space for two primary care practices as well as a comprehensive array of community health, outpatient clinics, and other health and care services, making services more accessible to the local population. It is scheduled to complete by the autumn of 2025.

- However, it is recognised that utilisation rates within these centres have decreased and are currently poor, with considerable void (unused) space - 9% in Balmoral Gardens

raising to 22% in Rainham. This is primarily due to recent increases in service charges and other significant costs relating to inflation, plus the fact that rent for these buildings also includes funding to manage backlog maintenance, rather than let it grow which has historically been the case in many other NHS and public sector buildings. This is not a localised issue and is impacting on buildings across the NHS.

- Void space has to be funded by NHS Kent and Medway. This is a waste and the ICB and Health and Care Partnership are currently undertaking a piece of work to identify potential options to support current and future tenants and significantly improve utilisation, whilst also recognising the need for contractual equity across providers. We are also looking at how best utilisation can be improved through greater collaboration with other partners such as the voluntary sector and Medway Council.

- These properties are among Kent and Medway's best healthcare estate, with modern facilities and minimal backlog maintenance, as this is funded through the current contractual arrangements with the LIFT Co.

Acute Hospital Services

- The NHS Medway Foundation Trust Estates and Facilities Strategy followed the launch of their Clinical Strategy. A key strand underpinning the estates strategy is a fully integrated development control plan which aims to enhance site access and connectivity, both internally and externally.

- The strategy prioritises improving functional flow and spatial quality within hospital facilities while integrating green infrastructure. An extensive hospital maintenance programme, green and sustainable programme and demanding capital programme has been incorporated into these plans as well as key priorities such as Endoscopy provision, car parking, access and reduction in carbon emissions. The Trusts overarching goal is to create a more accessible, efficient, and sustainable hospital environment that enhances the well-being of patients, staff, and visitors.

Sustainable developments and securing developer contributions

- It is our responsibility to ensure health services and all future proposed developments are sustainable from a revenue affordability, capital investment and workforce perspective. We must ensure that, wherever possible, we maximise the delivery of care close to where people live, and that existing and neighbouring residents' access to NHS health and care services is not disadvantaged by new developments.

- The availability of NHS capital funding for estate development is severely constrained. Annual capital is allocated by NHS England to NHS Kent & Medway based on existing footprint and is directed towards specific spend on the current estate. There is no allowance for additional footprint in that general allocation. New and additional premises are funded through national programmes such as the New Hospital Programme – Kent & Medway was not successful in bidding in that programme, and the Diagnostics Programme which has funded building for specific services rather than population growth. There is no funding programme for new premises required as a result of population growth. As such, developer contributions are necessary to mitigate the impact of this development.

- Developer contributions play a key part in the delivery of sustainable development, ensuring that health infrastructure is delivered in a timely manner, and is appropriately situated and accessible. Put differently, developer contributions are needed to fund health and care infrastructure which supports sustainable population growth.

- Historically, Kent and Medway commissioning organisations have had variable results in securing Section106 funding and Community Infrastructure Levy (CIL) funding. In areas where this funding has not been secured, it has inevitably resulted in lost opportunities. More recently however, considerable effort has been made to develop strong partnership arrangements with local planning departments across the county and this is now starting to bear fruit. In particular the Primary Care Team have developed good relationships with local planning departments to help secure funding for GP practices. However, we are also starting to move away from developing individual organisational establishments and more towards multi-purpose buildings with primary, community, mental health and other services all being under one roof.

- Both the Ministry of Housing, Communities & Local Government (MHCLG) and NHS England have clearly highlighted the potential for NHS Trusts and ICPs to gain greater contributions towards healthcare through S106 and CIL funding of up to £200m across all the ICSs per year. This can be achieved through effective engagement with local authorities and data driven models to quantify demand across multiple healthcare services. Current tools and methods used to secure contributions are limited and out of date, leading to an increase in reliance on external consultancies to provide evidence on a case-by-case basis. This is not only expensive, but also limits an ICS's ability to capitalise on the significant opportunity to secure much needed funding towards healthcare.

- Therefore, to promote sustainable development and secure maximum developer contributions, NHS Kent and Medway is in the process of finalising the production of a Developer Contributions Guide, which will set out the developer contributions that may be required by the NHS to support population growth brought about by the significant increase in housing developments, thus mitigating any adverse impacts on local health and care services. The ICB is currently seeking the input and comments of local planning departments and a final version of the Developer Contributions Guide will be published in early autumn

- Alongside the production of the Developer Contributions Guide, NHS Kent and Medway is also rolling out its 'sidm health' healthcare planning tool. Sidm Health is a unique data analytics platform designed to support integrated healthcare estates planning with a population health-led approach. Over the last 6 months, we have been working with local councils' planning departments and provider NHS Trusts to populate the toolkit with the necessary baseline information. Each of the councils' planning departments have been provided with a number of licences to enable them to use the toolkit, and super-user training is currently being rolled out. The ICB and Health and Care Partnerships have already started using this information in earnest to inform local authority Plans and required developer contributions, providing much greater clarity on local requirements to maintain effective levels of health and care services.

- Together, we expect the new Developer Contributions Guide and the sidm health estates planning toolkit to deliver the much needed investment into health and care infrastructure across Kent and Medway.

NHS Kent and Medway will continue to work with Medway Council through the Local Plan development process to inform and secure future healthcare infrastructure plans and requirements as part of the healthcare infrastructure estates strategy for Medway.

Yours sincerely

Simon Brooks-Sykes
Deputy Director for Strategic Estates and Sustainability
NHS Kent and Medway

Our ref: NH/24/07797

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[redacted]

6 September 2024

FAO: Medway Council Local Plans Team

Dear Sir/Madam,

MEDWAY COUNCIL LOCAL PLAN REGULATION 18 SUBMISSION

Thank you for inviting National Highways to comment on the Medway Council (MC) July 2024 Regulation 18 consultation, seeking a response no later than 11.59pm on Sunday 8 September 2024.

Strategic Overview

We would firstly like to remind you of our strategic role as a statutory consultee and how this relates to planning matters.

As you know, we are responsible for the operation and maintenance of the strategic road network (SRN) in England. We are committed to supporting Government objectives on economic growth and sustainable transport and recognise the need for closer integration of transport and land use planning as set out in the Department for Transport (DfT) Circular 01/2022 *'The Strategic Road Network and the Delivery of Sustainable Development'*. National Highways is referred to as "the company" in this document: https://www.gov.uk/government/publications/strategic-road-network-and-the-delivery-of-sustainable-development/strategic-road-network-and-the-delivery-of-sustainable-development

Primary Focus – Strategic Road Network (SRN)

With regards to this MC July 2024 Regulation 18 consultation, we are concerned with plans or proposals that have the potential to impact the safe and operation of the SRN. As with all Local Plans the impacts of its proposals may be felt within and beyond the authority boundary. Consequently, we will be concerned with the Medway Plan's impacts along the

east- west A2/M2 corridor and the various north-south corridors such as the A229 Bluebell Hill.

We (and our spatial advisors JSJV), Medway Council (MC) and Kent County Council (KCC) have been working together on a regular basis, including prior to MC commencing work on the current Local Plan.

National Highways has previously reviewed the following documents in connection with the Medway Local Plan Modelling exercises, which have informed the current consultation:

- Data Collection Report (DCR)
- Local Model Validation Report (LMVR)
- Forecasting Methodology Technical Note (FMTN)
- Modelling Approach and Forecasting Methodology (MAFM) Technical Note
- Medway Local Plan Forecasting Report (MLPFR)

Comments on these documents have been provided during the period December 2023 to July 2024. Collectively they set out how the base models for the Medway Model have been constructed and validated and describe the methodology to be applied to the forecasting modelling for the future year models required for testing of the Local Plan options, with the MLPFR presenting the outputs of the forecasting modelling. Most of these documents (now with the prefix “Strategic Transport Assessment”) are included as part of the supporting documents library for the current consultation.

Work continues with regards to the modelling work in readiness for the Regulation 19 consultation. Our comments on the main July 2024 Regulation 18 document are therefore focused on how the transport evidence for impacts on the SRN relates to presented policies, and how the emerging Local Plan itself responds to key policies including Circular 01/2022.

We have therefore reviewed the information submitted in association with the July 2024 Regulation 18 consultation and offer the following comments.

July 2024 Regulation 18 Consultation

Our review of the main document is set out by section heading, following the structure of the consultation document. We have not offered comments on sections of the report which do not contain any material of relevance to the SRN or National Highways.

Vision and Strategic Objectives

The strategic objectives for the emerging Local Plan are arranged into four categories. Transport is addressed as part of the “Prepared for a sustainable and green future” category, with the main relevant objective seeking to give priority to “safe and effective” choices for sustainable travel, improving walking and cycling facilities, and managing the highway network.

NH response: The Strategic Objectives are broadly aligned with policy (as set out in the current Circular 01/2022) with regard to the location of development and growth, the association between spatial planning decisions and climate impacts, and the principles of planning via a vision-led approach.

Spatial Growth Options

This section of the report briefly summarises the Council's previous appraisal of three potential spatial options for the area. Of these, option SGO 3 is stated to be the current indicative preferred option and represents a "blending" of regeneration of brownfield land with some greenfield development in locations where the council has judged that this can meet the wider needs of the area in a manner which is compatible with its other proposed policies. The sites within SGO 3 are shown on the indicative proposals map provided alongside the main report.

SGO 3 is understood to form the basis of the future forecasting modelling work which has been reported on in detail in the supporting documents.

NH response: If the contents of the preferred option change in response to the July 2024 Regulation consultation, it is expected that the transport impacts, including the impacts on the SRN, of the amended strategy are modelled.

Natural Environment

Policy S1: Planning for Climate Change identifies the use of spatial planning as a critical element of the Council's Net Zero strategy.

NH response: The aims and objectives of this policy are aligned with Circular 01/2022's policies with regard to reducing the need to travel.

Housing

We note that the Housing section of the consultation document contains policies relating to specific housing types and housing mix. The section does not provide any information on the net need for housing that the Plan is responding to and how far each spatial growth option goes in addressing this. This means it is not possible to understand the level of unmet need and what this might mean for wider impacts within and beyond the Medway area in terms of the SRN.

NH response: The Plan would benefit from a summary of the housing land supply position. This should outline the gross and net need for housing that the Plan is expected to address. It would be helpful if the housing numbers associated with each spatial growth option could be identified including the level of unmet need. This would enable the reader to understand better how each option performs against the

Sustainability Appraisal objectives and if there is the prospect of the development needs of Medway being addressed across a wider area which could have consequences for the SRN.

NH response: The cumulative impacts of the proposed housing sites are being tested through the strategic modelling exercises and it is expected that this work will be refined between the current July 2024 Regulation 18 consultation and a future Regulation 19 consultation.

Economic Development

National Highways is regularly engaged in discussions with the Council and developers regarding employment development at larger sites across the local authority area, and where development is proposed in areas close to (or on the boundary of) the SRN itself. This includes discussions relating to several of the key employment sites identified within the proposed policy S10.

NH response: The cumulative impacts of the proposed major employment sites are being tested through the strategic modelling exercises and it is expected that this work will be refined between the current July 2024 Regulation 18 consultation and a future Regulation 19 consultation.

Retail and Local Centres

We have noted the specific requirements which are expected to arise with regard to development on the Hoo Peninsula and the current limited provision of local retail which means that there are significant movements by existing residents to Strood and Bluewater for both shopping and leisure purposes, many of which use the SRN.

NH response: We agree in principle with the proposed strategy to require new development in this area to help address existing need as well as that generated by the development itself

Transport

<u>Transport Vision</u>

Section 9 of the July 2024 Regulation 18 consultation document addresses matters relating specifically to Transport.

NH response: Paragraph 9.1.4 references the Council's intention to move from a "mitigative" approach to the transport impacts of development to a "creative" approach which is based on a "vision". This broadly aligns with the principles set out

in Circular 01/2022 and is therefore considered to be in general conformity with this national policy for the SRN.

The vision for transport is expressed as a proposed transport policy, with subsequent transport policies then building upon different elements of the vision. The vision as a whole is constructed to reflect the aspirations described in paragraph 9.1.4; of particular importance with regard to impacts of Local Plan (and existing) development on the SRN are the following:

- Greater internalisation (including via increased home working and local employment) for the Hoo Peninsula;

- Increased home working and provision of demand-responsive transport to reduce car dependency in rural villages;

- LTC and (KCC) Bluebell Hill schemes are assumed to have been completed (we note that this element of the vision may need to be updated once further announcements are made with regard to LTC and any case for the delivery and funding of Bluebell Hill is made and confirmed)

NH response: The vision is broadly supported. We welcome a vision where the need to travel is reduced. This can help manage down the traffic impacts of growth on the SRN. The vision would benefit from a more positive view of harnessing opportunities for sustainable travel, i.e., Medway is a place where opportunities for walking, wheeling, cycling, and public transport are being maximised. This would align with the expectations of DfT Circular 01/2022.

Monitor and Manage Strategy (Policy DM15)

The July 2024 Regulation 18 consultation document refers to the Strategic Transport Assessment (STA) as the major source of transport information which is intended to underpin the transport strategies within the Local Plan. Key amongst these is the proposed Monitor and Manage strategy.

It is noted that the STA is being prepared in stages and that parts of the STA will be prepared between the Regulation 18 and Regulation 19 consultations.

NH response: In order to align with the expectations of DfT Circular 01/2022, the STA should, for the SRN, assess impacts (and subsequent development of mitigation requirements) based on a residual impacts approach where the expected impacts of vision-led development are considered.

Paragraphs 9.2.7 to 9.2.10 set out how the council proposes to collect relevant financial contributions toward mitigation measures.

NH response: The Local Plan and any supporting documents must clearly demonstrate how any required SRN mitigation (or those on the LRN that will have implications for the SRN) will be governanced, funded and delivered., National Highways will not accept contributions for mitigation to the SRN that is necessary to support development. Priorities for the SRN are set in the Road Investment Strategies (RIS). There must be no presumption that mitigation required to the SRN to support the growth planned for in the Local Plan will be funded through a future RIS (01/2022, para.29). We will work with the council to identify any necessary mitigation, agreeing the design to an appropriate level of detail for the Local plan and when it needs to be delivered, but we will not be responsible for its promotion or delivery.

NH response: The Infrastructure Delivery Plan (IDP) is an important live document that needs to be produced prior to the Regulation 19 Plan. It should provide details of the where, what, when, how much, who pays, who promotes and who delivers of any SRN related infrastructure The IDP is a useful tool for the monitor and manage regime and should be kept live and up-to-date during the lifetime of the Plan.

NH response: Policy DM15 should outline the monitor and manage regime in terms of who will be engaged (a Transport Infrastructure Management Group?) and how this process will be informed by the IDP which will be kept up-to-date.

It will be important to ensure that mitigation funding keeps pace with mitigation costs, or that there are proportionate and deliverable alternative means to achieve the same ends.

NH response: Further work will be required to demonstrate how any trip budget based methodology complies with C1/22 and the NPPF, particularly in terms of Vision & Validate and mitigating residual impacts. We would then need to understand how the methodology will be applied; for example, how larger sites in particular will be expected to implement site-specific measures to achieve reductions in private car travel which will be consistent with the vision-led approach. The trip budget should set trip limits for these sites which are consistent with the vision, and these should be materially lower than the reasonable worst case.

Where the reasonable worst case scenario indicates a need for mitigation works on the SRN, we would further recommend that an additional modelling test be carried out which applies trip rates which are consistent with the vision for the site(s) in question; this will enable any risk of overprovision to be addressed through the monitor and manage approach, and inform the IDP in terms of other schemes which may also benefit from the works but where the timing of delivery is expected to run ahead of the "main" sites.

We would suggest that the above should be integrated with the text at paragraph 9.2.6 which acknowledges the risk to the delivery of the vision if additional highway capacity is delivered either ahead of, or in lieu of, other mitigations focused on active and sustainable travel. Individual large sites should have their own targets, rather

than using the default "10% below Trip Budget" figure that is currently stated in draft policy DM15.

We anticipate that these matters can be addressed via production of the proposed Medway-wide Monitor and Manage mitigation strategy and would welcome further discussion on this topic ahead of the Regulation 19 consultations.

Active Travel Interventions

NH response: The general approach is consistent with the vision as presented in the Plan and the provision of new and improved infrastructure to support active travel for journeys where this is a reasonable option is in alignment with national policy.

Grain Branch

The proposed re-introduction of passenger services to the Grain Branch line (via provision of a new station at Sharnal Street would offer potential benefits to the SRN by offering an alternative mode for some longer-distance trips for people resident or working on the Hoo peninsula, assuming that either direct links to desired destinations or convenient connections to other services are facilitated. It would also (as described at paragraph 9.4.6), potentially reduce existing car trips made by commuters to other stations in Medway from this area, which would in particular benefit the A228 corridor and Four Elms areas, which have been identified from the strategic modelling exercises as coming under significant additional pressure as a result of potential development sites being assessed in the context of the emerging Local Plan.

NH response: Whilst the complexities and costs associated with this scheme would be very significant, and delivery of any new service or station would only be realistic towards the end of the plan period, the potential for a "step change" in travel patterns to the benefit of the SRN would be significant. We therefore consider this element of the transport strategy to be consistent with the aims and requirements of national policy.

Aviation

We note that some enhancement of Rochester Airport is envisaged during the lifetime of the plan to support the consented development associated with Innovation Park, which is located adjacent to the airport site. It is stated that there are no plans for commercial or scheduled flights to operate from the airport.

NH response: We are of the view that any impacts associated with changes to the operation of the airport can be dealt with via the planning process and are content with the wording of policy T23.

Urban Logistics

The main July 2024 Regulation 18 document sets out the Council's intention to protect existing B8 sites within the authority area, on the basis that this will support expansion of local delivery services. We are aware of the pressures and demand for B8 floorspace generally in north Kent and Medway; this is reflected in the text of paragraph 9.8.6.

We anticipate that, depending on the decision ultimately reached with regard to the Lower Thames Crossing, interest in B8 floorspace in Medway could increase, which would undoubtedly lead to significant additional freight demand on the SRN.

NH response: While we are content with the wording of the policy around urban logistics, it may be appropriate for a direct reference to SRN demand to be included in the supporting text, particularly if a decision to proceed with LTC is taken between the time of writing and the preparation of a Regulation 19 submission. Also there will be a need to distinguish between traditional B8 storage and distribution and last mile delivery since their characteristics and impacts on the road network, local amenities etc are very different.

User Hierarchy and Street Design

NH response: We support the principles of design established through the policies in this section that encourage use of active and sustainable modes.

Accessibility Standards

NH response: Any improvements or changes to SRN infrastructure will be required to follow the appropriate design processes, which include full consideration of accessibility needs for all users.

Transport Assessments, Transport Statements and Travel Plans

Paragraphs 9.11.4 and 9.11.5 effectively reproduce previous written advice from National Highways with regard to how TAs and other related documents should be scoped and prepared where impacts to the SRN from development are expected. This wording is therefore compatible with current policy including Circular 01/2022. Paragraph 9.11.6 reinforces the need for National Highways to be consulted as part of the pre-application process.

It is also noted that the wording of policy DM18 also specifically quotes National Highways advice and is explicit about the requirements which TAs and other documents will need to meet.

NH response: Paragraph 9.11.7 highlights the Council's guidance for developers, which includes recommendations to make use of the Council's current highway model. This currently takes the form of the cordoned version of the Kent Transport Model prepared by Jacobs, which National Highways has been involved with as part of the current Local Plan work. We agree that this approach will be beneficial for the further assessment of Local Plan schemes and any additional proposals which come forward outside of the Local Plan process.

Parking

We do not have any specific comments with regard to the proposed parking policies; however, we note the clarification at paragraph 9.12.6 stating that SPDs cannot contain new policy identifying use of land, and that therefore the Council's current adopted parking policy is provided as an appendix to the main consultation document.

NH response: The current adopted parking policies are stated to require a minimum number of parking spaces, but with a mechanism to allow a lower ratio of parking to be provided in urban locations which have good access to sustainable transport and easy access to local facilities within walking and cycling distance. We would recommend that this mechanism to be applied to larger development sites. We would not expect a lack of provision with regard to sustainable transport and access to local facilities to be used as a reason to justify a level of parking provision which would disincentivise use of sustainable and active modes.

NH response: Policy DM19 states: *The Council's current vehicle parking standard is set out in Appendix B. This is anticipated to be updated over the plan period*. Reviews of Local Plans are subject to the same regulations and processes as the preparation of Plans. Enshrining detailed parking standards in the Local Plan may limit the council's ability to be agile and flexible and respond to changes during the lifetime of the Plan. The council may wish to consider inserting additional text which states that the council's current vehicle parking standard represents a starting point which will be considered in the context of the prevailing national planning policy for parking at the time decisions are taken on applications.

Waste Management

NH response: We note the Council's strategy to become self-sufficient in terms of the management and recycling of waste generated within the local authority area; this will minimise the amount of waste which is required to be transported over longer distances and which would therefore need to use the SRN.

Proposals Maps

NH Response: We note that the July 2024 Regulation 18 Plan is supported by a series of Proposals Maps. While providing a spatial distribution of sites, no details have been provided regarding the scale of development on each site. It will not be possible to for us to assess the implications of the spatial distribution until this detail has been made available.

Engaging with Neighbouring Councils on Their local Plans

Under the NPPF, transport is a strategic, potential cross boundary matter requiring Council's to work appropriately and proportionately together to consider the individual and cumulative impacts of their Local Plans on the SRN.

The Maidstone Local Plan has recently been adopted. Gravesham, Swale and Tonbridge & Malling in particular are also seeking to produce new Local Plans.

NH Response: It will be necessary for Medway to demonstrate how they have engaged Council's and how the individual and cumulative impacts of each Plan has been considered whether as part of any reference case or sensitivity testing.

Next Steps – continued engagement

We remain committed to continuing to work with MC, and all other parties as appropriate, to ensure that the traffic impacts of the Local Plan on the SRN are accurately identified and assessed, with the identification of appropriate mitigation measures as required.

NH response: We recommend that, prior to any formal Regulation 19 consultation, any mitigation measures required in relation to SRN infrastructure will be identified and tested to an appropriate level in modelling and highway design terms, including any necessary sensitivity tests to address the risk of overprovision of physical infrastructure. We also anticipate that appropriate costing exercises will be carried out and integrated into a draft Infrastructure Delivery Plan (IDP), which will also clearly set out the anticipated phasing of major development sites across the plan period, and subsequently identify when specific mitigation measures will be required.

I hope that our responses assist, but if you have any queries, please contact me via planningse@nationalhighways.co.uk.

Yours sincerely

[redacted]

Kevin Bown
Spatial Planning Manager
Email: planningse@nationalhighways.co.uk.

Medway Local Plan Regulation 18 Consultation 2024

Thank you for consulting Gravesham Borough Council (GBC) on your emerging Local Plan. The comments that follow have regard to the Planning Inspector's report on Gravesham's Local Plan (2014); the Government's existing policy requirements set out in the National Planning Policy Framework (NPPF 2023); and the current Government consultation on revisions to the NPPF. In terms of this consultation, it is recognised that the final form of the NPPF and the outcomes of the consultation will not be known until later this year.

We note however that they are potentially important in respect of our emerging Local Plans because:

- Housing targets will effectively be made compulsory using the revised Standard Method, subject to the application of NPPF paragraph 11(b).
- The duty to cooperate between us will be strengthened under new paragraph 27, with evidential requirements relaxed in terms of negotiation and examination.
- A requirement that there be a consistent approach to infrastructure planning and delivery, particularly where any allocation or designation cuts across the boundary of plan areas or has significant implications for a neighbouring area.
- New paragraph 142 makes it clear that when reviewing Green Belt boundaries that exceptional circumstances justifying release can include (but are not limited to) meeting housing or commercial needs; and
- The revised NPPF paragraph 155 introduces "golden rules" whereby land released from the Green Belt for major development will be expected to deliver 50% affordable housing (subject to viability) and other benefits, with Annex 4 effectively benchmarking the value that a landowner can expect for such land.

Background on discussions to date

Gravesham officers shared with you what we considered are the main strategic cross-boundary issues between the two authorities in May 2024, as follows:

- **Housing Delivery and meeting housing need as set by Government** – in order to meet the requirements of the Government's current standard method or proposed standard method, the Council is required to consider Green Belt release to meet growth requirements, due to the lack of availability of brownfield land and land within the urban area and settlements inset from the Green Belt. As such, we have and continue to request that Medway consider whether it could accommodate any of that need.

- **Gypsy and traveller accommodation** – As required by the Government's Planning Policy for Traveller Sites (PPTS), both authorities have an unmet need for sites, and there is a need to set targets and identify sites in our emerging Local Plans.

- **Transport** – particularly in relation to issues around M2 junction 1 and capacity to accommodate development in both Gravesham and Medway. However, there are also local road network and public transport impacts that need to be considered. Whilst Gravesham Borough Council do not support the Lower Thames Crossing project, it is recognised that the project is supported by Medway Council.

- **Air quality** – particularly in relation to the A2 Air Quality Management Area.

- **Potential development on shared boundary at Chapter Farm, Higham** – including:
    - Highway impacts and the potential to promote active travel.
    - Green Belt issues and whether Medway was prepared to consider release of Green Belt in their area to jointly bring forward a sustainable urban extension at Strood.
    - Local infrastructure and potential impacts on services in the Medway area – although development here could also benefit the adjoining area of Strood.
    - Landscape impacts and how development here might link into, expand and improve the local green infrastructure network.

You are also aware that we are undertaking further work in terms of economy and employment; a Green Belt Review around Culverstone Green in response to points raised by the Planning Inspector at the examination of our Core Strategy; and on transport. The need to meet unmet housing need by reviewing the Green Belt, as set out earlier, also stems from the Planning Inspector's examination of our Core Strategy and the requirements of the Government's National Planning Policy Framework. In addition, work is going on in the background at a Kent and Medway level on a Local Nature Recovery Strategy (LNRS).

Any decision on the Lower Thames Crossing Development Consent Order (DCO) and the subsequent construction of the road (if permitted) will also be an important consideration given the likely impacts and the disruption it will cause on both the Strategic Road Network and Local Road Network. Given that the scope of the project was limited and did not address the project's immediate impact on adjoining SRN junctions and network i.e. M2/J1, M2/J3, Bluebell Hill, etc, despite GBC's requests, the impact of growth in this corridor and the project, is likely to exacerbate existing traffic congestion and will require mitigation.

Our understanding is that, should the Lower Thames Crossing progress, main construction works are likely to commence in 2026 with the road opening in 2033, please see https://nationalhighways.co.uk/our-roads/lower-thames-crossing/what-is-the-lower-thames-crossing/our-development-consent-order/.

Comments on the Medway Regulation 18 Stage 2 documents

It is only intended here to provide short comments on key issues as there will be further discussions at various levels under the duty to co-operate. You are aware of our pre-existing need to consider Green Belt release in various locations, including Chapter Farm at Three Crutches, to accommodate identified development needs as set out in our Regulation 18 Stage 2 consultation in 2020.

At various points throughout this response, queries will be raised where we consider it to be important to establish our relative positions, in advancing our local plans and to establish any basis on which we can work collaboratively.

Local Housing Need (LHN) and Spatial Options

Having considered the outputs from the Government's proposed revised Standard Method, it seems that the housing need for figures for Dartford (-76 dpa), Gravesham (+32 dpa), Medway (-14 dpa) and Swale (+21 dpa) have only varied a little from those currently applied.

It is the local authorities to the south that will find the revised Standard Method more challenging – i.e. Maidstone (+ 124 dpa); Tonbridge and Malling (+237 dpa); and Sevenoaks (+ 409 dpa).

Your consultation documents were prepared before the Government published its proposed changes and it is noted that section 3.1.2 of your Interim Sustainability Appraisal states that your Local Housing Need (LHN) over the plan period to 2041 is for 26,528 homes. Applying a 5% buffer for flexibility results in an approximate need for 27,854 homes.

In terms of options for delivery, the consultation documents say that you have considered:

- An urban focus;
- Dispersed growth; and
- Blended urban regeneration and greenfield.

Whilst the consultation document states that the urban focused option would not deliver sufficient levels of development and you have therefore had to look at alternative options, it is not clear what levels of development each of the options could deliver against your LHN. Paragraph E15 of the Interim Sustainability Appraisal provides an idea of the development capacity of broad locations for growth, but these have not been totalled for each option.

Questions:

1. What period is the Local Plan intended to cover and can additional detail be provided as to how the 26,528 homes figure has been calculated? We assume that this is based on a 16-year plan period at the current 1,658 dpa to 2041 rather than the minimum 15 years required under NPPF paragraph 22.
2. The plan allows for a 5% buffer for the whole plan period (+ 1,326) rather than for the first 5 years, drawn down later from the plan period as per paragraph 76 of the proposed revised NPPF. Whilst applying a 5% buffer for the entire plan period may be robust and reflect that some sites may not come forward, is this necessary under existing and proposed national policy?
3. What are the anticipated housing yield figures for the three spatial options and how do they compare to your LHN?
4. Given the growth being proposed, has the Council considered all the infrastructure requirements arising from such an increase in resident population? Gravesham has an issue with burial space which it is currently considering, and it would be helpful to know what the situation will be in Medway moving forwards.

Housing land supply in Gravesham and the request to Medway

As you will be aware from our Regulation 18 Stage 2 consultation in 2020 and from subsequent Duty to Co-operate meetings, Gravesham is reluctantly in a position where to accommodate the growth requirements set out by Government under the Standard Method, it has to consider Green Belt release.

This position also goes back to the examination of the Gravesham Local Plan Core Strategy (2014) where the Inspector only found our plan ‘sound’ on the basis of main modifications that committed (amongst other things) to a Green Belt review to identify further housing sites to address a small shortfall in the later part of the plan period. The situation in terms of

housing land supply and delivery has deteriorated over time, given the introduction of the Standard Method via the NPPF, economic instability and affordability issues.

We have been through the exercises required by Government under national policy in terms of making as much use as possible of suitable brownfield sites and underutilised sites in the urban area and inset settlements and have sought to optimise the density of development in sustainable locations. This has included the resolution to permit up to 3,500 dwellings at the Northfleet Harbourside mixed use development under application GR/2022/1064.

Notwithstanding this, to ensure that we have an initial 5-year deliverable housing land supply, and the package of sites are capable of providing for an appropriate housing mix to meet identified local housing needs, looking beyond existing developed areas is the only realistic option.

Your consultation recognises the outstanding request from Gravesham to meet some (not all) of its unmet housing need but suggests that further evidence is required on this point.

To provide sufficient evidence under the proposed new paragraph 27 of the NPPF and to demonstrate the likely scale of unmet need without Green Belt release in Gravesham, we are prepared to supply details of the Borough's housing land supply, should you require additional information. Note that this information will be shared on a confidential basis.

It is intended that the same request and offer will also be made to other neighbouring authorities, although it is recognised that some of these are in a similar or worse situation than Gravesham.

Questions:

5. Provided Gravesham is prepared to supply the above information, is Medway prepared to reconsider our long-standing request to meet some of our housing need to at least reduce the extent of Green Belt release?
6. On this, Medway previously looked at accommodating 2,000 units of Gravesham's unmet need – is this still the case or could you provide a figure we can factor into our consideration of spatial options? How does this relate to the spatial options you have considered?
7. If Medway accommodates any of Gravesham's unmet need, how would this affect your housing trajectory? This is something that needs to be considered to ensure that our housing trajectories align and that the pattern of delivery over time for both areas can be understood e.g. in relation to infrastructure impacts and delivery.

The issue of Green Belt release and impact on Medway

The Council has currently made no final decisions on Gravesham's spatial strategy. However, our Regulation 18 Stage 2 consultation in 2020 did identify the potential to release land at Three Crutches, on the Medway boundary inside the A289 Wainscott by-pass.

Whilst this is Best and Most Versatile (BMV) agricultural land and greenfield, as stated previously, we have very little previously developed or 'grey belt' land in sustainable locations within our Green Belt. Release of land inside the A289 on the edge of Strood would facilitate the development of a sustainable urban extension, which could reduce the

need to travel by car better than more dispersed options and bring benefits to existing adjoining communities.

It is noted that both your urban focused and dispersed growth options appear to have considered the potential to develop greenfield sites in Medway inside the A289 but that the blended urban regeneration and greenfield option omits it.

On this, it is noted that Green Belt sites here have been promoted by landowners or developers – i.e. sites SNF1, SNF2, SNF3 and SR5.

The consultation documents do say that Green Belt release was considered but that effectively it was not needed to meet your development needs and that it would result in harm to the Green Belt purposes by reducing the gap between Gravesend and Medway.

Whilst this may be the case, 'exceptional circumstances' justifying Green Belt release are not limited to simply meeting need but can also be a strategic decision – case law has established that release is not an option of last resort. In this instance, if Gravesham had to argue for the release of Green Belt in this location, it is almost inevitable that it would compromise the remaining Green Belt within the A289 in Medway.

In light of this, it should be possible for both LPAs to work collaboratively on a joint sustainable urban extension in this location. It is also possible that such an option would be more sustainable than some of the more dispersed sites you are currently considering.

Questions:

8. Does Medway accept the need for Gravesham to review its Green Belt in light of the Planning Inspector's Report on Gravesham's Core Strategy and the National Planning Policy Framework, including the release of Green Belt land for development inside of the A289 within Gravesham?
9. If yes, what would the implications for Medway be in terms of infrastructure?
10. Are Medway prepared to revisit its own options in this area and work collaboratively on bringing forward a sustainable urban extension?

Implications of development on the Hoo Peninsula for Gravesham

A substantial proportion of the proposed development under your preferred option would take place on the Hoo Peninsula, around Hoo St Werburgh. This proposal has been subject to several rounds of consultation in the past considering what form of settlement may emerge, its requirements in terms of infrastructure and how its impact might be mitigated. Gravesham's primary interest in this aspect of your local plan is the potential impacts on the rural settlements in the north-east of our borough around Higham. There is potential for transport and a range of other impacts, including increased vehicular traffic on the network of rural lanes in the area and people seeking to access train services from Higham.

In terms of train services, it is noted that whilst the HIF money was withdrawn, Appendix 14 to the Viability Assessment accompanying your consultation includes a strategic infrastructure cost of around £50m to support the re-introduction of passenger rail services to Sharnal Street. Policy DM17 safeguards land (temporary and permanent) for the delivery of the project, with this aspiration also being cited at 2.3 in the Regulation 18 document on the Spatial Development Strategy and the safeguarding being shown on the draft Policies Map.

Please note that the re-introduction of passenger rail services on this line does not appear to have been factored into Kent County Council's LTP5 which is currently out for consultation.

Questions:

11. Have the impacts of the growth proposed in Medway's Local Plan on rural settlements in Gravesham, public transport and the local road network been evaluated and, if so, how do Medway propose to mitigate all unacceptable impacts that are identified?

12. In terms of the reintroduction of passenger rail services to Sharnal Street, such a project would also include works in Gravesham, with the trains presumably terminating at Gravesend Station. Are you requesting that such safeguarding also be included in the emerging Gravesham Local Plan and, if so, can you provide the necessary evidence to justify such a policy? Have you evaluated potential impacts on Gravesham and, if so, what are they? Would the full cost of such works and any subsidy be met by Medway, and/or others, so no cost falls on Gravesham? Where is the transport evidence supporting your policy as it does not seem to have been factored into your Transport Report?

Employment Land Supply

Whilst it is appreciated that Medway is updating its evidence base in relation to employment land supply, the consultation documents state that you have a current need for around 69 hectares to accommodate floorspace to accommodate offices/light + general industrial/warehouse type floorspace. Medway One would be sufficient to accommodate most of this (60 hectares) with a significant additional supply in the form of extant permissions on the Isle of Grain. There are also other potential allocations or developments in the pipeline, including at Chatham Dockyard, Rochester Airport – some being in Tonbridge and Malling.

Questions:

13. Employment land supply in Medway appears to be significantly above evidenced need. Whilst most of this benefits from extant permissions and represents the recycling of previously developed land, are there any labour supply implications that need to be considered in determining local housing need? Conversely, have any implications of an oversupply of jobs in these sectors on adjoining authorities and sustainability e.g. impact on travel to work areas been taken into consideration?

14. Whilst the national policy position is to focus growth on brownfield land, the emerging Local Plan, whilst identifying that most of the employment sites are on previously developed land, would appear to present an option to allocate an additional greenfield site close to Medway One (Kingsnorth) and east of Beluncle Farm. This is currently subject of a planning application under MC/23/0104. While this site does not directly impact on Gravesham, how is this allocation being justified when Medway already has a significant oversupply of employment land which is previously developed and how does this relate to the national policy position on 'brownfield first'?

Transport Issues

It is noted that Medway is using a cordoned version of the Kent Transport Model (KTM) with and without LTC to test the transport implications of its emerging Local Plan. Within the fully

modelled area, a robust approach to traffic generation is taken, extrapolating from a base year and growing highway movements on the network based on agreed trip rates and potential site allocations.

Outside of the fully modelled area, overall trip generation appears to be constrained to National Trip End Model (NTEM or TEMPRO) levels for car-based journeys or Road Traffic Forecasts for HGVs. These are adjusted to consider local uncertainty based on a WebTAG approach. Gravesham has adopted a similar approach to its own transport modelling work, undertaken by the same consultants.

As you quite rightly point out, whilst this may provide evidence on the impact of planned developments within the fully modelled area above the reference case (i.e. Do Minimum vs Do Something) it does not necessarily properly reflect future conditions where TEMPRO understates the levels of growth that are likely to take place in the area feeding onto the highway network.

Looking at your Transport Report, it appears that the cross-boundary issue is traffic generation out of the Hoo Peninsula, down the A289 Wainscott by-pass towards M2 junction 1 and the Strategic Road Network (SRN). The report seems to suggest that further modelling is required to test design solutions for the Four Elms Roundabout to determine capacity, how traffic may reassign and what further highway or other interventions (such as public transport/active travel) would be required.

However, there does not appear to be much discussion in the report of impacts on M2 junction 1 where there is a known existing capacity constraint which will not be resolved by the design of the new LTC junction. As such, the emerging Local Plan does not reflect whether the proposed growth can be accommodated by M2 Junction 1. If the proposed growth cannot be accommodated, there is a need to understand if an acceptable and viable design solution exists, and how it will be delivered and by whom.

Medway and Gravesham have engaged on this matter previously, and it would appear to go to the heart of the revised duty to co-operate under proposed NPPF paragraph 27(a) and something we need to resolve jointly – particularly as it also affects any decisions of how much development can come forward, where and when.

Questions:

15. Does Medway agree with the above the above analysis and that transport is a cross-boundary strategic issue that needs to be further explored to determine how our emerging spatial strategies align?
16. In light of the growth being promoted and with the Lower Thames Crossing project in mind, has consideration been given to how the Strategic Road Network both within and adjacent to Medway would function, what, if any, improvements are needed and how will they be delivered?
17. Given the potential impacts of the proposed growth on travel to work areas, can Medway confirm that it is their intention to look at improved connectivity by rail to facilitate sustainable travel options?

Accommodation for Gypsies and Travellers.

As required by the Government's PPTS (2023), Policy T10 sets out a pitch/plot target for those Gypsies and Travellers and Travelling Showpeople (referred to as Travellers going forward) who meet the planning definition set out in Annex 1 of the PPTS. The targets included accord with the evidence set out in the updated GTAA (2024), the latter having been produced to meet Government updated planning definition.

Policy T1 proposes to meet identified needs through the protection of existing sites and their intensification or expansion, rather than allocating new sites. The Government's PPTS (2023), at paragraph 10, requires local planning authorities in producing their Local Plan, to:

a) identify and update annually, a supply of specific deliverable sites sufficient to provide 5 years' worth of sites against their locally set targets.

b) identify a supply of specific, developable sites, or broad locations for growth, for years 6 to 10 and, where possible, for years 11-15.

At this consultation stage, no evidence has been provided to show that the identified pitch/plot need for those Travellers who meet the planning definition can be met through intensification/expansion of the proposed list of safeguarded sites without the need to allocate additional sites, as no new site allocations are proposed at this stage. There is no evidence to show how many and when additional pitches will be delivered on each of the safeguarded sites.

In addition, it is unclear whether new pitches on the safeguarded sites would be subject to the same criteria as new sites, in terms of meeting the planning definition, location, scale etc, which may limit which safeguarded sites would be suitable for expansion/or extension.

The following comments are raised in response to the proposed criteria for assessing new sites. The second criterion requires demonstration of a need for a new site which can be met through the expansion of an existing site. Is this a typological error? If not, this implies that the need for windfall sites would have to be met via the expansion of existing sites, which is unrealistic. Also, it would be helpful in the background text to outline what factors you consider demonstrate a need for site.

The third criterion lists locations where new sites will not be permitted, largely reflecting the constraints in footnote 7 of paragraph 11 of the NPPF. It is questioned whether resisting new sites in all these areas is in line with national guidance eg AONB's, areas of best and most versatile agricultural land, and therefore where there is an identified need that cannot be met elsewhere, whether new sites should be allowed in these areas subject to their scale and appropriate mitigation measures to address harm?

The fourth criterion requires sites to be located where occupants will have accessibility to local services and facilities. Accessibility to services and facilities varies depending on whether sites are located in the urban or rural area. Additional background text should be provided to clarify what this means.

The sixth criterion relates to design and refers to other building design and spatial policies in the plan. Reference to the policies that should be taken into account should be provided for clarity. However, having looked at the general design policy, it is unclear what criteria would be pertinent to Traveller proposals. The Sustainability Appraisal suggests making reference

to good practice guidance specific to Gypsy and Traveller sites such as designinggypsysites.pdf (publishing.service.gov.uk), which, although dated, is still used.

Questions:

18. How are Medway proposing to meet the requirements of paragraph 10 of the PPTS?
19. Can Medway clarify if it is their intention to only allow new sites by expanding or intensifying existing (safeguarded) sites or whether these criteria relate to windfall development?
20. Is the list of areas where new sites will not be permitted in line with the PPTS?

Concluding remarks

The above comments have concentrated on what we consider to be key issues that we need to explore and resolve through the duty to co-operate. There will no doubt others that emerge through detailed discussion moving forward.

NHS Property Services

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06 September 2024

BY EMAIL ONLY

RE: Consultation on Medway Local Plan 2041 (Regulation 18) – July 2024

Thank you for the opportunity to comment on the above document. The following representations are submitted by NHS Property Services (NHSPS).

NHS Property Services

NHS Property Services (NHSPS) manages, maintains and improves NHS properties and facilities, working in partnership with NHS organisations to create safe, efficient, sustainable and modern healthcare environments. We partner with local NHS Integrated Care Boards (ICBs) and wider NHS organisations to help them plan and manage their estates to unlock greater value and ensure every patient can get the care they need in the right place and space for them. NHSPS is part of the NHS and is wholly owned by the Department of Health and Social Care (DHSC) – all surplus funds are reinvested directly into the NHS to tackle the biggest estates challenges including space utilisation, quality, and access with the core objective to enable excellent patient care.

General Comments on Health Infrastructure to Support Housing Growth

The delivery of new and improved healthcare infrastructure is significantly resource intensive. The NHS as a whole is facing significant constraints in terms of the funding needed to deliver healthcare services, and population growth from new housing development adds further pressure to the system. New development should make a proportionate contribution to funding the healthcare needs arising from new development. Health provision is an integral component of sustainable development – access to essential healthcare services promotes good health outcomes and supports the overall social and economic wellbeing of an area.

Residential developments often have very significant impacts in terms of the need for additional primary healthcare provision for future residents. Given health infrastructure's strategic importance to supporting housing growth and sustainable development, it should be considered at the forefront of priorities for infrastructure delivery. The ability to continually review the healthcare estate, optimise land use, and deliver health services from modern facilities is crucial. The health estate must be supported to develop, modernise, or be protected in line with integrated NHS strategies. Planning policies should enable the delivery of essential healthcare infrastructure and be prepared in consultation with the NHS to ensure they help deliver estate transformation.

NHS Property Services

Detailed Comments on Draft Local Plan Policies

Our detailed comments set out below are focused on ensuring that the needs of the health service are embedded into the Local Plan in a way that supports sustainable growth. When developing any additional guidance to support implementation of Local Plan policies relevant to health, for example in relation to developer contributions or health impact assessments, we would request the Council engage the NHS in the process as early as possible.

Draft Policy T3: Affordable Housing

In undertaking further work on local housing needs, we suggest the Council consider the need for affordable housing for NHS staff and those employed by other health and care providers in the local authority area. The sustainability of the NHS is largely dependent on the recruitment and retention of its workforce. Most NHS staff need to be anchored at a specific workplace or within a specific geography to carry out their role. When staff cannot afford to rent or purchase suitable accommodation within reasonable proximity to their workplace, this has an impact on the ability of the NHS to recruit and retain staff.

Housing affordability and availability can play a significant role in determining people's choices about where they work, and even the career paths they choose to follow. As the population grows in areas of new housing development, additional health services are required, meaning the NHS must grow its workforce to adequately serve population growth. Ensuring that NHS staff have access to suitable housing at an affordable price within reasonable commuting distance of the communities they serve is an important factor in supporting the delivery of high-quality local healthcare services. We recommend that the Council:

- Engage with local NHS partners such as the local Integrated Care Board (ICB), NHS Trusts and other relevant Integrated Care System (ICS) partners.
- Ensure that the local need for affordable housing for NHS staff is factored into housing needs assessments, and any other relevant evidence base studies that inform the local plan (for example employment or other economic policies).
- Consider site selection and site allocation policies in relation to any identified need for affordable housing for NHS staff, particularly where sites are near large healthcare employers.

Draft Policy T29: Community and Cultural Facilities

Draft Policy T29 seeks to protect and enhance existing facilities and support provision of new community facilities where there is an identified need. NHSPS supports the provision of sufficient, quality community facilities but does not consider the proposed policy approach to be effective in its current form. Where healthcare facilities are included within the Local's Plan definition of community facilities, policies aimed at preventing the loss or change of use of community facilities and assets can potentially have a harmful impact on the NHS's ability to ensure the delivery of essential facilities and services for the community.

The NHS requires flexibility with regards to the use of its estate to deliver its core objective of enabling excellent patient care and support key healthcare strategies such as the NHS Long Term Plan. In particular, the disposal of sites and properties which are redundant or no longer suitable for healthcare for best value (open market value) is a critical component in helping to fund new or improved services within a local area. Requiring NHS disposal sites to explore the potential for

alternative community uses and/or to retain a substantial proportion of community facility provision adds unjustified delay to vital reinvestment in facilities and services for the community.

All NHS land disposals must follow a rigorous process to ensure that levels of healthcare service provision in the locality of disposals are maintained or enhanced, and proceeds from land sales are re-invested in the provision of healthcare services locally and nationally. The decision about whether a property is surplus to NHS requirements is made by local health commissioners and NHS England. Sites can only be disposed of once the operational health requirement has ceased. This does not mean that the healthcare services are no longer needed in the area, rather it means that there are alternative provisions that are being invested in to modernise services.

Where it can be demonstrated that health facilities are surplus to requirements or will be changed as part of wider NHS estate reorganisation and service transformation programmes, it should be accepted that a facility is neither needed nor viable for its current use, and policies within the Local Plan should support the principle of alternative uses for NHS sites with no requirement for retention of a community facility use on the land or submission of onerous information. At present the Draft Policy is not explicit that only one criteria must be met in order for the loss of a community or cultural facility to satisfy the Policy. To ensure the Plan is positively prepared and effective, NHSPS are seeking the following modification (*shown in red italics*) to Draft Policy T29 and supporting paragraph 10.4.7 to ensure the principle of alternative uses for NHS land and property will be fully supported:

Proposed Modification to Draft Policy T29:

"…There is a presumption against the loss of community facilities in rural and urban areas.

Any proposal which would result in the loss of a community facility or cultural facility will not be permitted unless:

- An alternative community facility (social infrastructure) which meets similar local needs to at least the same extent is already available*; or*
- It can be shown that the proposal does not constitute the loss of a service of particular value to the local community nor detrimentally affect the character, sustainability and vitality of the area*; or*
- Additional/improved provision including the utilisation of vacant and under-used land for arts, cultural and creative purposes is provided*; or*
- It can be demonstrated that it is no longer economically viable and cannot be made so, unless sufficient marketing evidence has been supplied*; or*
- *The facility is a healthcare facility that has been formally declared surplus to the operational healthcare requirements of the NHS or identified as surplus as part of a published estates strategy or service transformation plan.*

[bullet point deleted] Proposals for new community facilities should:

- Have safe access by cycle and walking within reasonable walking distance, public transport and car and incorporate a travel plan; and
- Have safe drop-off and pick-up provision; and
- Avoid conflict with adjoining uses.

- ~~Healthcare facilities are formally declared surplus to the operational healthcare requirements of the NHS or identified as surplus as part of a published estates strategy or service transformation plan.~~

Proposed Modification to Supporting Paragraph 10.4.7

"For proposals that involve the loss of community (including shops), ~~*health and*~~ cultural facilities, the Council will require evidence firstly that an alternative facility or facilities can be found within easy walking distance, where planning permission is required. Evidence will need to demonstrate that there is at least one such facility which offers services and an environment comparable to that of the facility subject to the proposal. *Where healthcare facilities are formally declared surplus to the operational healthcare requirements of the NHS or identified as surplus as part of a published estates strategy or service transformation plan, no further evidence is required.*

Draft Policy T27: Reducing Health Inequalities and Supporting Health and Wellbeing

Draft Policy T27 sets out the Council's commitment to making sure that new developments promote healthier lifestyles and improve overall health and wellbeing. NHSPS support the inclusion of policies that support healthy lifestyles, and the requirement for Health Impact Assessment on significant residential developments of 10 units or more (major developments). There is a well-established connection between planning and health, and the planning system has an important role in creating healthy communities. The planning system is critical not only to the provision of improved health services and infrastructure by enabling health providers to meet changing healthcare needs, but also to addressing the wider determinants of health.

Draft Policy S24: Infrastructure Delivery

Draft Policy S24 sets out the overarching policy for ensuring development makes a positive contribution to sustainable growth through the delivery of appropriate infrastructure in a timely manner. NHSPS welcomes the recognition of health infrastructure as key infrastructure within supporting paragraph 10.5.4 and recommend that this is continued to be reflected in the Local Plan with an expectation that development proposals will make provision to meet the cost of healthcare infrastructure made necessary by the development. In areas of significant housing growth, appropriate funding must be consistently leveraged through developer contributions for health and care services to mitigate the direct impact of growing demand from new housing. Additionally, the significant cumulative impact of smaller housing growth and the need for mitigation must also be considered by the Plan.

We also emphasise the importance of effective implementation mechanisms so that healthcare infrastructure is delivered alongside new development, especially for primary healthcare services as these are the most directly impacted by population growth associated with new development. As set out in Draft Policy S24, the NHS, Council and other partners must work together to forecast the health infrastructure and related delivery costs required to support the projected growth and development across the Local Plan area. NHSPS recommend that the Local Plan have a specific section in the document that sets out the process to determine the appropriate form of developer contributions to health infrastructure. This would ensure that the assessment of existing healthcare infrastructure is robust, and that mitigation options secured align with NHS requirements.

The Local Plan should emphasise that the NHS and its partners will need to work with the Council in the formulation of appropriate mitigation measures. NHSPS recommends that the Council engage

with the relevant Integrated Care Board (ICB) to add further detail within the Local Plan and supporting evidence base (Infrastructure Delivery Plan and the Guide to Developer Contributions and Obligations) regarding the process for determining the appropriate form of contribution towards the provision of healthcare infrastructure where this is justified. As a starting point, we suggest the following process:

- Assess the level and type of demand generated by the proposal.
- Work with the ICB to understand the capacity of existing healthcare infrastructure and the likely impact of the proposals on healthcare infrastructure capacity in the locality.
- Identify appropriate options to increase capacity to accommodate the additional service requirements and the associated capital costs of delivery.
- Identify the appropriate form of developer contributions.

Healthcare providers should have flexibility in determining the most appropriate means of meeting the relevant healthcare needs arising from a new development. Where new development creates a demand for health services that cannot be supported by incremental extension or internal modification of existing facilities, this means the provision of new purpose-built healthcare infrastructure will be required to provide sustainable health services. Options should enable financial contributions, new-on-site healthcare infrastructure, free land/infrastructure/property, or a combination of these. It should be emphasised that the NHS and its partners will need to work with the Council in the formulation of appropriate mitigation measures.

General Comments on Evidence Base relating to Healthcare Infrastructure

The provision of adequate healthcare infrastructure is in our view critical to the delivery of sustainable development. We recommend the Council engage with the NHS, particularly the ICB, on an on-going basis as part of preparing the Infrastructure Delivery Plan (IDP). A sound IDP must include sufficient detail to provide clarity around the healthcare infrastructure required to support growth, and to ensure that planning obligations effectively support and result in capital funding towards delivery of the required infrastructure.

Related to this, appropriate healthcare costs should be factored into the Local Plan Viability Assessment for relevant typologies. Such an approach means that developers are adequately informed in advance that they may be required to make contributions towards healthcare infrastructure. A separate cost input for health infrastructure in the plan viability assessment would ensure that healthcare mitigation is appropriately weighted when evaluating the potential planning obligations necessary to mitigate the full impact of a development. This is particularly important in situations where a viability assessment demonstrates that proposals are unable to fund the full range of infrastructure requirements.

Conclusion

NHSPS thank Medway Council for the opportunity to comment on the Regulation 18 Draft of the Medway Local Plan. We trust our comments will be taken into consideration, and we look forward to reviewing future iterations of the Plan. Should you have any queries or require any further information, please do not hesitate to contact me.

NHSPS would be grateful to be kept informed of the progression of the Local Plan and any future consultations via our dedicated email address, [redacted]

Yours faithfully,

Hyacynth Cabiles
Town Planner
E: [redacted]

For and on behalf of NHS Property Services Ltd

creating a better place
for people and wildlife

Environment Agency

Planning Policy Team
Medway Council
Sent by email

Our ref: KT/2006/000047/CS-08/PO1-l01

Date: 06 September 2024

Dear Planning Policy Team,

Medway Local Plan 2041 - Regulation 18 Consultation, July 2024

Thank you for consulting us on your Regulation 18 document 'Medway Local Plan 2041' and the associated evidence base.

We received consultation from you on 15 July 2024 and would like to provide comments with respect to our remit. We hope that you find our comments useful, and we would be pleased to meet with you to discuss in more detail any issues or queries you may have.

Environment Agency position
Our aim is to assist you prepare and implement a sound, robust, and effective plan that is reflective of national policy and your local evidence base. We hope that this collaborative process leads to a plan that delivers sustainable development, contributes to a stronger economy, and safeguards the environment for future generations.

Please refer to the following sections (attached) for further information:

- Section 1 – Vision and Strategic Objectives
- Section 2 – Spatial Growth Options
- Section 3 – Environmental Issues and Opportunities:
  - 3.1 Flood Risk
  - 3.2 Groundwater and Contaminated Land
  - 3.3 Biodiversity
  - 3.4 Waste
  - 3.5 Water Quality
  - 3.6 Water Resources

Our detailed comments for each of the above are provided below, following the general order of the topics presented in the draft local plan document. Where we

wish to see policies strengthened, we have outlined the additional content we would like included. We have also referenced the relevant sections and policy numbers for ease of navigating our response.

Duty to Co-operate
Most natural resources extend across multiple Local Authority areas. We encourage the Council to make full use of the Duty to Co-operate when revising this draft local plan. Cross-boundary, collaborative working will ensure that strategic priorities across local boundaries are properly co-ordinated. Please consider this when addressing climate change, flood risk, waste management, habitat and biodiversity enhancement, watercourse protection and improvement, water and waste resources.

Environment Agency Planning Advice Service
As allocated or windfall sites with relevant environmental constraints or opportunities progress towards development, we would encourage applicants to engage with our planning advice service as early as possible. We can provide detailed guidance on and/or review technical information for development proposals, prior to submission of planning applications, as part of our cost recoverable planning advice service. Engagement with us prior to formal submission can provide applicants with greater certainty regarding our position and can speed up our formal response to planning applications. It should also result in better quality and more environmentally sensitive development.

Should you require any additional information, or wish to discuss these matters further, please do not hesitate to contact us via the email below.

Yours sincerely,

Kimberley Wadsworth
Planning Advisor

[redacted]

1. Vision and Strategic Objectives

Vision for Medway in 2041 (pp 20)
We welcome that, in line with our response to your Regulation 18 consultation 'Setting the Direction for Medway 2040 (September 2023)', your vision now references both green and blue infrastructure.

2. Spatial Growth Options

Overview, paragraph 3.1.7 (pp 28)
We note that *'flood risk, and mitigation and adaptation to climate change'* measures will be covered at the next stage of the local plan. We recommend that this additional comment is made:

'This may include a mechanism for financial contributions to flood management schemes.'

Preferred spatial growth option, paragraph 3.2.1 (pp 28-29)
In considering Strategic Growth Options (SGO) and specifically SGO 3, reference should be made to your Strategic flood Risk Assessment (SFRA) and the extent of Flood Zone 3b (functional floodplain).

3. Environmental Issues and Opportunities

3.1 Flood Risk

Policy S1: Planning for Climate Change (pp 30-31)
We note that Policy S1: Planning for Climate Change states that '*development shall contribute to making demonstratable progress in the achievement of a net zero carbon Medway by 2050*', which slightly contradicts the above statement '*The vision and strategic objectives of the Local Plan set out Medway's aims to significantly progress to net zero carbon emissions by 2041*'. We recommend that a consistent approach is taken here.

Adaptation to climate change
We are pleased to see the positive policy statements and narrative relating to the need to '*manage flood risk*', in relation to adaptation to climate change in Policy S1. Climate change will cause Medway Towns proposed for future development to be at increased risk of flooding, therefore we are pleased to see '*Provide resilience to the impacts of climate change in the design of development.*' Prioritising flood and coastal risk management is essential, with a focus on making space for, and enhancing the quality of defences throughout the lifetime of any development. Th

However, we recommend the inclusion of Working with Natural Processes (WwNP), and/or Natural Flood Management (NFM) in this section. Flood and coastal risk management should consider using Nature Flood Management (NFM) techniques where possible, with a focus given to the protection and enhancement of rivers and river corridors, the re-naturalisation of rivers, encouraging soft-engineering

approaches to riverbank protection, and the incorporation of an undeveloped buffer zone. We recommend that this bullet point is aligned with the requirements under the Water Framework Directive (WFD) and reiterate that it is the statutory duty of Local Authorities to deliver WFD objectives under the Water Environment Regulations (2017).

Question 1 (pp 32)
The council should consider local strategic policies relating to the need to deliver flood risk infrastructure and river enhancement. We recommend that you have strategic development briefs that enable wider development of strategic areas at flood risk, in which all developers would need to contribute to a flood risk infrastructure project. For example, this could include strategic development areas in one flood risk cell, such as Strood, Chatham, Medway City Estate, Chatham Docks and Kingsnorth.

Policy S2: Conservation and Enhancement of the Natural Environment (pp 32-33)
We recommend that the section of this policy which refers to '*requirements for development to contribute to strategic environmental management programmes*' is updated to include flood defence schemes:

Existing wording:
'There may be requirements for development to contribute to strategic environmental management to ensure an effective mitigation approach in particularly sensitive locations, such as in close proximity to designated sites.

Recommended wording:
'There may be requirements for development to contribute to strategic environmental management and/or flood defence schemes to ensure an effective mitigation approach in particularly sensitive locations, such as in close proximity to designated sites and areas of significant flood risk, either now or in the future.'

Question 2 (pp 34)
The Environment Agency is responsible for the strategic overview of flood and coastal risk management activities on main rivers and the coast. As such we, along with other Risk Management Authorities, have flood risk management plans and proposed schemes to manage flood risk across the area. These projects are required to support communities and infrastructure to be resilient to flooding and climate change in the future. They would also be required to deliver BNG, as well as other environmental measures to protect and improve the designated habitats and wider environment. As a result, whilst we support the aspiration for a higher 20% target for BNG, this may impact the deliverability of some schemes when considering partnership funding scores. We recommend that the Council considers how a higher BNG target would impact the viability of flood risk management plans and proposed schemes. We would be happy to discuss in further detail how this should be incorporated into your Local Plan.

Question 3 (pp 36)
We have no comments in response to the Bird Wise SAMMS programme, but the opportunity needs to be taken for a similar tariff-based scheme to provide contributions to the MEAS programme. This may not be a 6km zone but an alternative method of defining the area would be required. For example, it could be based on the extent of the flood cell and the number of new residential units, employment posts, and community services that will benefit.

Policy S4: Landscape protection and enhancement (pp 38)
We support the narrative in paragraph 4.5.15 which references '*action to enhance, restore or create landscapes.*' We recommend that wording to the same effect is included in Policy S4 to support the development that will be permitted in and alongside the undeveloped coast. This policy supports the Medway Estuary and Swale (MEAS) programme in delivering realignment of flood defences and restoring natural intertidal habitats as part of a sustainable coastal flood management plan.

Question 4 (pp 40)
Medway Council should identify landscapes of local value within the local plan. The areas identified should align with the Medway Estuary and Swale Strategy areas of coastal realignment which may include areas of low landscape value. Due to sea level rise and climate change the value of such 'low value' landscapes may increase as improved habitats provide an opportunity for carbon sequestration.

Policy S5: Securing Strong Green and Blue Infrastructure (pp 41)
The MEAS programme will contribute towards Policy S5 by feeding into the Kent and Medway Local Nature Recovery Strategy.

Question 6 (pp 43)
We support the key issues raised in the draft Medway Green and Blue Infrastructure Framework including:

Local Nature Recovery Strategies (LNRS) - It is worth noting that coastal adaptation schemes and restoration of natural coastal habitats are likely to be significant opportunities for the MEAS tidal flood risk area.

Policy S6: Kent Downs Area of Outstanding Natural Beauty National Landscape (pp 45)
We are pleased to see that '*opportunities to restore and enhance the special characteristics and natural capital of the Kent Downs NL*' is referenced in Policy S6. We recommend that reference is made to restoration of natural processes and habitats in areas where coastal defences are placed within AONBs. This policy compliments the MEAS strategy to withdraw maintenance in AONBs to allow restoration of natural processes.

Flood risk in Medway, paragraph 4.8.3 (pp 47)
This paragraph makes reference to the Thames Estuary Plan (TE2100). We recommend referencing the date that the strategy was produced (2012), and that it was updated in 2023.

Links to flood risk strategies and assessments, paragraph 4.8.5 & 4.8.6 (pp 47)
The 2012 edition of the Thames Estuary 2100 (TE2100) Plan outlined that each council in the Plan area would produce its own standalone riverside strategy document. However, the update of the Plan published in 2023 recognises that there are other ways to adopt the riverside strategy approach. As part of creating Benefit Delivery Plans (currently referred to as Outcome Delivery Plans), we will work with our partners to identify how they intend to embed the riverside strategy approach. This could be through developing a new standalone document, or via a combination of local plan policies, site allocations, supplementary planning documents, masterplans, planning performance agreements, marine plans, and green space strategies.

The local plan provides a great opportunity for Medway to refence the Riverside Strategy Approach and the TE2100 plan in general. Within the TE2100 plan it is acknowledged that there is currently no riverside strategy for this area, but by 2030, councils should work with communities to plan how their riverside will look in future. We have attached guidance on the Riverside Strategy Approach.

It is important that new documents or strategies complement and enhance existing ones. There is no need to duplicate work if there are already other strategies that can be input into or brought together to meet all the targets simultaneously.

Paragraphs 4.8.5 and 4.8.6 refer to other locally significant plans and strategies. It is good to see that you refer to the TE2100 Plan at this point. However, at the moment, it could be seen that consideration of the TE2100 plan is purely based around flood risk as it is only mentioned in Section 4.8 (Flood and water management), however, since the 2023 refresh of the plan, it is the intention that the TE2100 plan will cover more than just flood risk.

The Plan is a long-term strategic plan with 3 main aims:

Aim A
Take an adaptive approach to manage tidal flooding and create climate resilient communities.

Aim B
Protect and enhance the value of the Thames, its tidal tributaries and floodplain. Deliver social, cultural and commercial benefits for communities and support resilient growth.

Aim C
Tackle the climate and nature crises by putting sustainability at the heart of this Plan. Restore ecosystems, reduce carbon emissions, and deliver environmental and biodiversity net gain.

We have attached the TE2100 Plan Sustainability Framework.

The Environment Agency and our partners have identified 5 areas where we can make an impact:

- the climate emergency
- the nature emergency
- carbon management
- circular economy
- social outcomes

These themes follow sustainability legislation, partner plans and national and international policy and I note many of these are already echoed in Medway's Sustainability Appraisal and Habitats Regulation Assessment.

We would be very happy to discuss the Sustainability Framework, Riverside Strategy Approach, Benefit Delivery Plans and the TE2100 plan in further detail with you. It is our intention to work with partner organisations to ensure the TE2100 Plan can realise the identified outcomes and deliver the benefits. We are at an early stage in communicating the Sustainability Framework with partner organisations and have already begun discussions with partner organisations who are implementing the Riverside Strategy Approach. The most recent published riverside strategy approach is on the river Darent in Dartford: Riverside Strategy – Dartford Borough Council. We would suggest that you look at this and discuss directly with Dartford Council as well as the Environment Agency as a working example for the Riverside Strategy Approach being implemented.

Another strategy that we would suggest to you is the Joint Thames Strategies Refresh Info for Boroughs (jtsrefresh.com) Joint Thames Strategies Refresh project. This project aims to update the existing Joint Thames Strategies and is also looking to extend this to the East of the existing Strategy.

The Thames Estuary Partnership will work with communities, councils, the Environment Agency and other partners to:

- update the Thames Strategy East upstream of Gravesend
- scope the need and potential extension of the Thames Strategy East or creation of an alternative Joint Thames Strategy downstream of Gravesend.

The Thames Estuary Partnership also acknowledge, once agreed, landscape visions for the river corridor will reflect how increasing tidal flood risk will affect the environment and include a riverside strategy approach to tidal flood defence upgrades.

To find out more about the Joint Thames Strategies project, contact [redacted]

Policy DM1: Flood and Water Management (pp 49-51)
Flood Risk Management
In the interests of clarity, we recommend that the first paragraph under 'Flood Risk Management' is reworded as follows:

Existing wording:
'Medway Council will manage flood risk by requiring applicants/developers to apply the Sequential Test and, where necessary, the Exception Test as part of the application:'

Recommended wording:
'*Medway Council will manage flood risk first by avoiding, so far as possible, development sites in current and future medium and high flood risk areas, considering all sources of flooding, including areas at risk of surface water flooding. To do this they have used the Strategic Flood Risk Assessment to inform the Local Plan development sites and demonstrate the application of the Sequential Test. For those development sites which have passed the Sequential Test, the proposed development must pass the Exception Test as per the National Planning Policy Framework guidance. As part of this Test, they must:*'

Adaptation to Climate Change
We are pleased to see '*Adaptation to Climate Change*' included in Policy DM1. However, we strongly urge a minimum 16m buffer zone to development proposals that contain or are adjacent to tidal watercourses. Please see our recommended wording as follows:

Existing wording:
'Seeking opportunities to make space for water and develop new blue infrastructure to accommodate climate change.'

Recommended wording:
Measures to protect and enhance rivers as a valuable resource for wildlife and biodiversity, blue infrastructure and climate change resilience.

Development should not encroach within a minimum of 16m to tidal main rivers, unless justified by evidence at planning application stage, and agreed in consultation with the Environment Agency.

The Functional Floodplain
Flood Zone 3b (FZ3b) is the functional floodplain. This zone comprises land where water from rivers or the sea must flow or be stored in times of a flood. Only 'essential infrastructure' is permitted in FZ3b (subject to the flood risk Exception Test) and 'water compatible' development, because of the expected high frequency of flooding and the particular importance of keeping these areas free from obstruction. The definition of FZ3b within the national Planning Practice Guidance (PPG) (Table 1: Flood Zones) has recently been updated and states that it will normally comprise:

- land having a 3.3% or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively; or
- land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding).

The current SFRA does not reference the national PPG definition of FZ3b. We recommend that you consider including this definition within Policy DM1: Flood and Water Management, to allow for more accurate sequential test implementation when determining land use allocation.

Alternatively, if you plan to update you SFRA to align with the up-to-date definition of FZ3b, we recommend reference be made directly to the updated SFRA within the Policy.

The Wandsworth Local Plan (2023) provides a good example of incorporating flood zone definitions into its flood risk policy (Policy LP12 Water and Flooding).

Policy T10: Gypsy, Travellers & Travelling Showpeople (pp 100-101)
In Policy T10, we note that new site proposals will not be permitted if they are located in '*flood risk zones 2 & 3*'. We recommend that the impacts of climate change are taken into consideration before permission is granted for sites that are currently in flood risk zone 1. The Strategic Flood Risk Assessment (SFRA) should indicate areas that will move to higher flood risk classifications due to climate change. These outputs should be used to avoid designating sites that will be at a higher risk of flooding in the future.

Strood district centre, paragraph 8.10.8 (pp 136)
We note that there is an '*ambition for delivering major residential led riverside regeneration*' which has been '*illustrated in the Strood Waterfront Development Brief 2018*'. However, Strood town is a large flood cell that needs to benefit from continuous strategic flood defences before wider development across the Strood area is implemented.

Policy S20: Strood District Centre (pp 136-137)
We strongly recommend that Policy S20: Strood District Centre acknowledges that the Strood area is at tidal flood risk, and as such the Strood area will need strategic flood defences in place to enable safe development to take place. Where the policy states '*Proposals for growth in the centre will be guided by the following:'* We suggest adding the following bullet point:

'The development of strategic flood management infrastructure.'

3.2 Groundwater and Contaminated Land
Medway is underlain by Chalk bedrock in the south and west which is designated as a principal aquifer. Thanet Sands and the Lambeth Group extend from the northwest corner to the middle of the eastern boundary, which are both designated as secondary A aquifers. The northern extent is underlain by the London Clay Formation, which is designated as Unproductive Strata. Given the presence of the

River Medway and the River Thames, a large area of Medway is underlain by superficial geology which are designated as secondary aquifers and unproductive strata. Principal aquifers provide strategic potable water supplies. Secondary aquifers provide base flow to rivers and can provide strategic water supplies including potable water abstractions.

In Medway there are 10 Source Protection Zones predominantly located towards the south of the catchment situated within the Chalk bedrock.

Policy S3: North Kent Estuary and Marshes designated sites (pp 35-36)
We welcome this policy to identify the Medway Estuary and Marshes (wetlands) as priority sites to mitigate the impacts of local urbanisation. Wetlands are key indicators of groundwater quality given the connectivity between the two.

Policy DM1: Flood and Water Management (pp 49-51)
We welcome this policy and the incorporation of Water supply, Wastewater, Water quality and groundwater protection and Sustainable Urban Drainage.

Water supply
The water supply section of Policy DM1 states that '*Development within Groundwater Source Protection Zones and Principal Aquifers will only be permitted provided that it has no adverse impact on the quality of the groundwater resource, and it does not put at risk the ability to maintain a public water supply.*' We recommend that the following additional text is added:

'*Development within these areas will only be permitted provided suitable risk assessments are included, which outline that the development has no adverse impact on the quality of groundwater resources and does not put at risk the ability to maintain a public water supply.*'

Wastewater/foul water drainage
We note that Policy DM1 and Policy T40 reference wastewater management, however it may be beneficial to create a **Foul Water Drainage Policy** which identifies the hierarchy and identifies that for any large development, it would be unlikely for these developments to be permitted to discharge via a non-mains drainage system, given the potential risk to the environment. Any development proposing to discharge to a package treatment plant should identify if their proposed drainage strategy is compliant with the General Binding Rules. Developments which do not meet the General Binding Rules may require a permit and should consult with the Environment Agency. Should a permit be required, it cannot be guaranteed that a permit would be granted and as such we would recommend that any permit applications be run concurrently with any planning applications.

Major developments must provide provision to attach to mains sewer as part of the development to prevent discharge of large volumes of treated effluent to the environment. This should be agreed through liaison with the Local Water Undertaker.

Reference should be made to the Environment Agency's approach to groundwater protection, to enable developers to appropriately understand the required expectations from us for any proposed developments. We recommend that similar consideration be made to foul drainage as has been made to surface water drainage and recommend that should they be unable to meet the General Binding Rules, that the highest possible standards of treatment of foul water be required prior to discharge to the environment.

We would also recommend that wording be included to outline the need for mains drainage where necessary and the drainage hierarchy should mains drainage not be a viable option, as outlined below:

Private, non-mains foul drainage systems are not environmentally acceptable within publicly sewered areas. Planning applications must demonstrate that connection to the public sewer is feasible and any mitigating measures necessary to enable a connection must be identified and agreed between the applicant and the sewerage undertaker.

If a non-mains drainage solution is proposed, an applicant must demonstrate that it is not practicable to connect to the public sewer. Sufficient information to understand the potential implications for the water environment of non-mains drainage must be submitted, including the Environment Agency's Foul drainage assessment form (FDA1). The hierarchy of non-mains alternative solutions must be followed:

- package sewage treatment plants (which may be offered to the sewerage undertaker for adoption) where effluent goes through a wetland prior to discharge into the watercourse/ground as that will improve water quality; then
- septic tanks; then
- in the last instance, a cesspool if no other solution is possible.

Policy DM2: Contaminated Land (pp 53)
We welcome and encourage this policy to appropriately manage and remediate potentially contaminated land. We recommend that further comment be provided towards the requirement to remediate existing contamination and mitigate pollution from proposed developments, including, where development is proposed at sites known or suspected to be affected by contamination, a preliminary risk assessment (PRA) must be submitted at the earliest opportunity, and consideration must be given to receptors including controlled waters during any demolition, enabling and construction phases of development, including piling. Any assessments and investigations conducted on site should follow relevant guidance including Groundwater protection - GOV.UK, Land contamination risk management (LCRM) and our Guiding Principles for Land Contamination. The policy should include requirements to investigate, and if necessary, remediate potentially contaminated land, and to only permit development that has the potential to cause pollution to land or water, with appropriate mitigation measures.

Source Protection Zones (SPZs) should be included within this policy to ensure that they are considered when assessing potential environmental pollution risks,

particularly those which may pose a risk to groundwater as these should be promoted in areas outside of SPZ's. This includes proposals that have the potential to release hazardous substances to ground, involve effluent discharge to ground or will physically disturb an aquifer.

We welcome and encourage the redevelopment of brownfield sites, subject to submission of PRAs in support of planning applications, to ensure that the requirements set out in the National Planning Policy Framework (NPPF) (Paragraph 180) can be met. Ultimately, the submission of information such as a PRA can help Local Planning Authorities (LPAs) make an informed judgement on the safe development of any site, with regard to past use, proposed use and site setting.

3.3 Biodiversity

Policy S2: Conservation and Enhancement of the Natural Environment (pp 32-33)
Policy S2 states that '*The Council will promote the conservation, restoration and enhancement of priority habitats and species and seek opportunities to deliver net gains for biodiversity.*' We recommend the addition of the following wording:

River restoration:
'*Where there is an opportunity for river restoration enhancements, re-meandering, or the restoration of culverted watercourses to open channels, this should be actively pursued. If and where the watercourse is toe-boarded or engineered, opportunities for removal and restoration to a more natural state should be considered.*'

Pollinator strategy:
The vast shift we have made into large-scale, industrial and more intensive farming practices over recent decades has caused the health and quantity of wildflowers to be drastically reduced. Tragically, we have lost 97% of the UK's wildflower meadows since the 1930s. The plan should aim to incorporate a robust pollinator strategy to support our native bees through the provision of native wildflower areas. These could be incorporated into green and brown roofs as part of a sustainable urban drainage scheme. The provision of SuDS in addition has the potential to reduce contaminates discharging into the Thames.

Question 2 (pp 34)
We agree with providing Biodiversity Net Gain in principle. However, we would stress the importance of BNG uplift within urban brown sites whereby BNG at 20% or more should be actively encouraged within the planning system. Within areas of prime habitat, a similar uplift may be more difficult to achieve, therefore the question of having a two-tier system - one for residential and commercial development in urban areas where BNG is expected at over 20% and another for areas of already prime habitat where BNG minimum of 10% would be expected.

Aspirations to deliver more than 20% BNG should be justified on the basis of evidence that has been viability tested. Guildford Borough Local Plan: Development Management Policies (part 2 of the Local Plan) was adopted on 22 March 2023

with Policy P7: Biodiversity in New Developments requiring 20% BNG once BNG becomes mandatory. The main evidence to support 20% net gain in this case was Surrey Nature Partnership's recommendation for 20%. This was subsequently assessed through Guildford's viability assessment.

A recommendation for 20% BNG is included in Kent Nature Partnership's '*Viability Assessment of Biodiversity Net Gain in Kent (2022)*' report to Kent County Council: Biodiversity Net Gain | Kent Nature

BNG offers significant opportunity to deliver a wide range of environmental place-making outcomes such as:

- Flood Risk Management Plans (FRMPS).
- Nature recovery, reducing habitat fragmentation and increasing linkages between areas of wildlife rich habitat.
- Direct improvements to the water environment through both on and off-site watercourse and wetland enhancement, including actions and measures for River Basin Management Plans (RBMPs) under The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.
- Sustainable flood risk management, for example through the delivery of nature-based solutions and green Sustainable Drainage Systems (SuDS).
- Climate change mitigation, adaptation, and resilience measures, for example, ponds, reed beds, woodlands and intertidal habitats can absorb carbon and help mitigate the effects of climate change by slowing floodwater and cooling the air. These measures have the potential to help us meet net zero carbon targets.
- Improving water quality and reducing pressures of pollution on designated sites.
- Investing in green and blue infrastructure close to where people live can enhance their health and wellbeing (i.e. support environmental equity).
- Places can benefit indirectly from BNG by the avoidance of future costs to business that may be caused by flooding or pollution, or directly by increasing the market price of attractive green development supporting sustainable growth.

Policy S3: North Kent Estuary and Marshes designated sites (pp35-36)
We agree that mitigation measures for development within a 6km zone of influence is necessary to protect the designated sites. We would wish for greater mitigation measures where development is within 16 metres of these designated sites whereby a trigger automatically would ensure development seeks to provide where possible a setback intertidal flood defence and/or off- site mitigation where new salt marsh can be created. Please see the list of mitigation measures included under our response to question 6.

Question 3 (pp 36)
We agree that disturbance to birds from new development does at the outset need to be addressed before mitigation measures are implemented. For example, disturbance can be minimised through simple information boards asking to keep

dogs on their leads and an explanation as to why it is important to do so. A tariff-based approach which will presumably levy a charge on the development to provide mitigation measures is supported, however more information is needed to establish how these funds will be used to support bird populations.

Policy S4: Landscape protection and enhancement (pp38)
We agree that "*Development will be permitted in and alongside the undeveloped coast, only if:*

- *A coastal location is essential, and no suitable alternative site exists along the developed coast.*
- *The scenic, heritage or scientific value and character of the undeveloped coast is maintained and, where appropriate, and consistent with Policy S3, public access to the coast is improved.*"

Further to this, we recommend adding:

'Where there are opportunities to improve these environments, there should be a commitment to actively pursue these aims. This is consistent with BNG requirements, Policy S2 and S3, and the vision set out in The Kent Nature Partnership Biodiversity Strategy 2020-2045.'

Question 4 (pp 40)
Intertidal mudflat is a Biodiversity Action Plan (BAP) priority habitat and if it has not already been classified as a landscape of local value, we feel it should be. The intertidal area and the watercourse will need to be addressed for BNG to mean low water and should be considered as an extremely sensitive receptor from current urbanisation and new development. In addition, surface water inputs, from car wash businesses for example, would benefit from an educational campaign to ensure polluted is cleaned before entering the watercourse. This could potentially be done with a drain filter mat and could be something the Council endeavour to provide to businesses.

Policy S5: Securing Strong Green and Blue Infrastructure (pp 41-42)
We agree that this enhancement is important. We recommend more emphasis is placed on pollution sources that may affect these existing areas. We suggest a line is added to refer to the Council's commitment to reduce source pollution from affecting these sites. We suggest this is incorporated within the expectation of developments to provide SuDS and connectivity to existing blue green networks.

Question 5 (pp 43)
We agree that the council should promote the above-mentioned standards in the Local plan. To help achieve these standards, expectation of greening in conjunction with SuDS should be a pre-requisite within the planning process.

Question 6 (pp 43)
We are pleased to see that the draft Medway Green and Blue Infrastructure Framework (2021) has a good overall coverage of areas for improvement. However, please see and include the areas we have identified for enhancement. With regards

to SuDS, we feel that more could be done to educate and encourage private households to increase their greening factor with incentives (i.e. free grass seeds etc.) to encourage the minimising of hardstanding for driveways for example. This ultimately will lead to a better holistic approach to SuDS within the district and will help to reduce polluted run-off and improve attenuation. Please note that the 2021 document was the reference for this response, so if a more recent iteration has been produced, please do reconsult us.

We also recommend, as per The Kent Nature Partnership Biodiversity Strategy 2020-2045, more reference to the importance of river restoration. We suggest incorporating this within Policy S4.

Reasons for river restoration:

- Biodiversity Net gain
- Improving blue green connectivity
- Improving ecosystem services
- Improving water quality
- Improving flood risk
- Improving aesthetic and community engagement value.

Please see below for key areas that have been identified for enhancement within the district.

MEASURE	EASTING	NORTHING
Outer Whitewall Creek - remove hard defence and slope bank where possible.	575596	169796
Throughout waterbody – uphold no encroachment policy.	N/A	N/A
Halling Common/Marshes - manage realign to high ground (protecting infrastructure)	570824	164425
West of temple marsh - manage realign to high ground	572948	167800
Esplanade east - manage realign to road (protecting boat house)	573964	168475
Limehouse Wharf - intertidal terrace – step back defence and use estuary edges guidance	574640	169056
Northeast of Strood Pier- intertidal set- back – use estuary edges guidance	574146	169267
Council Offices - manage realign to road (protecting buildings)	575673	168263
New Stairs - manage realign (protecting buildings)	575653	168442
St Mary's Island - intertidal terrace – step back defence and use estuary edges guidance	576382	170700
Whitewall Creek - roll back bank and slope	575159	169742
Abbots Court - manage realign to high ground (protecting buildings and power station)	579475	172082
Middle Stoke - manage realign to high ground (protecting railway line/SWT)	583935	175252
Smithfield Marshes - manage realign (protecting road)	589213	175970

Policy T7: Houseboats (pp 90)
The sentence *"Avoid impacts to designated sites from moorings and/or increased disturbance to habitats and the species they support." s*hould be supported with the following text:

'Any new development that impacts upon BAP priority foreshore (Mudflat) must ensure that vessel wake and grounding upon the foreshore are mitigated for. The Environment Agency may ask for Foreshore monitoring plans where vessel wake is concerned, and a timber of metal grid/plinth system to ensure that vessels do not ground out over intertidal Mud when berthed. In canal and fluvial environment's, we the creation of wastewater infrastructure for the collection of houseboat waste will be encouraged.'

This is because we understand that source pollution, especially from moored houseboats, has a detrimental effect upon our waterways reducing dissolved oxygen and increasing phosphate and nitrogen input.

3.4 Waste

Minerals in Medway, paragraph 11.1.14 (pp 194)
This paragraph states that '*Facilities exist within Medway for the recycling of construction, demolition and excavation waste (C,D&E) at fixed sites to produce recycled aggregate*.' This is the case, but consideration should be given to the contractors used for any and all developments. In our experience, knowledge within the industry (at operational levels) of acceptable wastes which may be used to produce recycled aggregates and what to do with waste soil is poor and should be checked to reduce likelihood of contamination by hazardous components in construction, demolition and excavation waste (C,D&E/CDEW). This will reduce the likelihood of hazardous materials ending up in recycled aggregates used for construction.

Supply of recycled and secondary aggregate, paragraph 11.4.1 & 11.4.2 (pp 201)
Whilst recycled aggregate '*may also be sourced from closed inert landfill sites and dredging disposal sites*' and sites where '*waste management takes place may offer suitable locations for recycled and secondary aggregate production*' these sites must have a suitable Environment Agency (EA) Environmental Permitting Regulations (EPR) Permit which should be checked. Some operators have EA mobile EPR Permits which may be activated and deployed for temporary use in certain locations but standard or bespoke EPR permits are not quick to attain. Whilst exemptions are free and quick to register, only 1 may apply for recycled aggregate production with strict conditions, limited waste types, restricted activities and small quantities (<5,000T of waste other than bitumen).

Further information can found here: T5 waste exemption: screening and blending waste - GOV.UK (www.gov.uk)

Household waste, paragraph 12.1.21 (pp 208)
This paragraph refers to the creation of a single purpose-built facility to account for population growth. This would be ideal and would meet '*proximity principles*', provide jobs and plan for the redevelopment of potential site allocations.

Commerical and industrial waste, paragraph 12.1.23 and 12.1.24 & Construction, demolition and excavation waste, paragraph 12.1.25 - 12.1.28 (pp 208-209)
The recycling/recovery percentages may be mispresented by the quantities of CDEW which are misdescribed and misappropriated into products or disappeared into illegal waste sites. In particular, soil becomes a waste immediately after it is removed from its site of origin and will remain a waste i.e. it cannot be turned into an end of waste product (like some aggregates). Therefore, there may not be '*sufficient capacity to manage virtually all Medway's CDEW arisings through recycling*'. There are no waste materials from CDEW which could be described as '*soft material*' (even soil which will remain a waste). There are limited EA environmental permissions for depositing waste *'on land for beneficial purposes'* and which would certainly not include any derived from CDEW including soil. Untreated, clean, naturally occurring soil may be screened and mixed with certain standard of compost (PAS 100) by EA EPR permitted sites. Other treated soil (i.e. that which is produced from aggregate recycling) may only be disposed of at limited EA EPR permitted sites.

Wastewater and sewage sludge, paragraph 12.1.31 and 12.1.32 (pp 209)
Consideration should be given to separate wastewater systems for new builds to decrease the load on foul water sewage systems during periods of extreme rain and avoidance of use of and overflow of storm water tanks at sewage treatment facilities. Many pollution incidents have been recorded under those circumstances when sewage infrastructure proved inadequate. For example, soakaways for roof rainwater, Sustainable Urban Drainage Systems for car parks and road surface water.

Other recovery of non-hazardous residual waste, paragraph 12.1.37 (pp 210)
With reference to the Energy Centre, this would be ideal and would meet '*proximity principles*' and provide jobs. It would also account for the likely increase of waste items which will require incineration in the future (e.g. POPs (persistent organic pollutants) in other household items, in addition to Waste Upholstered Domestic Seating (WUDS) and hazardous WEEE (Waste Electrical and Electronic Equipment).

Future management of waste in Medway, paragraph 12.2 and Vision for Waste in Medway (pp 212)
We recommended considering adding details of how the Medway Local Plan will address minimisation of waste production, for example, contribution to producer responsibility, public education etc.

Paragraph 12.4.5 & 12.4.6 (pp 215-216)
All EPR permits stipulate that waste activities must not cause environmental pollution including noise, dust, litter, run off etc. All permitted operators must identify, reduce

and mitigate processes likely to cause pollution. There may not be any 'legitimate' emission impacts arising from EPR permit activities (except where consented e.g. water discharge or gas, but which must be monitored and limits set). Therefore, whilst any '*proposed development*' may incorporate 'mitigation measures', it will actually be the EPR permit operator's responsibility to ensure activities remain compliant in respect of emissions and pollution.

Policy T34: Safeguarding of Existing Waste Management Facilities (pp 215)
Under paragraph b it is stated that '*equivalent, suitable and appropriate replacement capacity*' will be provided in advance of any waste site needing to close. This provision will need to be planned well in advance since EA permit application delays still exist – over 2 years for some complex new permits or variations.

Provision of new waste management capacity and targets, paragraph 12.5
Consideration should be given to the fact that the recycling targets may be ambitious if there is not a change in reduction of waste in the first instance (e.g. material use in manufacturing, packaging, reducing resource use) and the public's attitude towards their waste Duty of Care responsibilities. Many problems on waste sites are caused by negligence of the initial producer (the public and businesses). For example, not separating waste, putting the wrong type of waste in the wrong container, batteries in black bag/plastics/dry mixed recyclables and not cleaning waste. Some household, 'black bag' waste can be recycled but when it is received at an amenity or transfer site it may end up as RDF (refused derived fuel) and staff will not have capacity to separate it after source. Plastic contamination of glass is a problem waste stream, currently. Batteries, in particular lithium ion, cause major disruption at waste sites due to causing fires in bulking stations and plant. Dirty plastics can affect optics in recycling plants meaning different types of plastics cannot be separated for recycling. These examples are not exhaustive. Some education being built into the Medway Plan may be beneficial (on reduce, reuse, repair, recycle, responsibility).

Construction, demolition and excavation waste management, paragraph 12.5.14 - 12.5.18 (pp 219-219)
We are concerned about the assertion that other 'recovery to land' of excavation wastes such as soils will be '*beneficial*', '*higher*' and that it is estimated there will be sufficient capacity in Medway/Kent. The management and classification of waste soil is complex. **Please can we request confirmation that soil removed from a site in the course of construction will all be disposed of via EA EPR permitted sites.** There are very limited uses of unprocessed clean, naturally occurring soils that do not require an EA EPR permit and which would be in limited quantities (e.g. CLAIRE Contaminated Land in Real Environments / DoW CoP (Definition of Waste Code of Practice declaration)). Clean, naturally occurring soil may be processed into 'manufactured topsoil' but only at an EA EPR permitted site and which 'product' may only be used in limited quantities under a Regulatory Position Statement (RPS). Options for treated soil from mixed construction and demolition waste would include a landfill or deposit for recovery EA permit. The 'beneficial use of inert waste' for engineering or backfilling may require waste aggregate to be processed into 'end of waste products' at an EA EPR permitted site under a Quality Protocol with strict criteria (i.e. not just screened on the site of production).

Other recovery of residual waste, paragraph 12.5.19 (pp 219)
Please note that incinerator bottom ash (IBA) is a priority waste stream and quantities may increase given additional incinerators are being used for increased quantities of RDF for EfW/CHP. IBAA (incinerator bottom ash aggregate) is the material made when primary or recycled aggregates are blended with IBA. IBAA remains a waste (whether primary or recycled aggregates are used in the blend). It is the IBAA which can be used in construction – but in limited quantities and locations (i.e. not near a watercourse). An EA campaign is currently assessing the environmental risks of IBAA use since it is believed quantities may be hazardous or that it is being used in inappropriate locations. Depending on the findings, therefore, 'other recovery' of IBA may be limited and possibly require landfill.

Hazardous and low-level radioactive waste, paragraph 12.5.25 to 12.5.29 (pp 222)
POPS WUDS waste is currently classified as non-hazardous but please note this may change and additional hazardous waste disposal necessary. However, since this waste must be incinerated anyway provided sufficient incinerator capacity is available for the likely increases in disposal of POPs WUDS waste in the future, the assertion that no additional hazardous waste management for this waste stream may be correct. However, consideration should be given to provision for likely increases in disposal of hazardous WEEE (Waste Electronic and Electrical Equipment) components after recycling/recovery including small domestic appliances (SDA), DSE (display screen equipment) and fridges and freezers etc most of which are hazardous (including because they contain POPs).

Wastewater and sewage sludge, paragraphs 12.5.30 to 12.5.35 & Policy T35: Provision of Additional Waste Management Capacity (pp 222-223)
There are conflicting statements here. The Medway Waste Needs Assessment (WNA) 2024 'Other' Waste Report states there is sufficient capacity, but Southern Water states there is a shortfall. Unless radical changes are made to wastewater systems and separation of surface and foul water drainage, due to population increase and extreme weather events, including those caused by climate change, sewage sludge treatment facilities are likely to encounter problems at certain periods causing pollution.

Other recovery, paragraph 12.7 (pp 225)
Regarding reduction in bio genic fractions for EfW or CHP (combined heat and power), incinerators require a certain calorific mix of wastes (which should be stated by the producer and agreed in a contract with the incinerator) in order for optimal incineration to occur including maintenance of emissions limits. Therefore, the elimination of a particular waste stream may not be advisable.

Landfill, paragraph 12.8 (pp 227-228)
A priority and problematic waste stream which will increase because of higher recycling percentages will be 'trommel fines (TF)'. TF is the very fine, light fraction left as a result of processing mixed wastes through a tumbling cylinder (recyclables and valuables being removed and sorted on a conveyor belt after this process). The

fines are required to be regularly sampled and tested to enable classification as hazardous or non-hazardous and can only be landfilled at an EA EPR permitted site. Due to the expense fines are frequently tipped illegally. Most fines will not qualify for lower rate landfill tax (LRLFT) (due to the waste types processed) but are frequently misdescribed and disposed of as such. Only inert wastes qualify for LRLFT (so a mixed skip from a household or commercial unit is likely to contain other non-inert wastes).

Question 44 (pp 229)
Relying on landfills for non-inert wastes outside of Medway does not meet '*proximity principle*' requirements, nor does it '*establish an adequate and integrated network of installations*.' However, if a new purpose-built recycling facility and Energy from Waste (EfW) incinerator are included as part of the Plan this might be appropriate.

12.9 & Policy T39: beneficial use of inert waste by permanent deposit (pp229-230)
We would dispute that '100% of inert excavation that cannot be recycled can be put to some beneficial use' so we would recommend a revision of these figures. As detailed within paragraph 12.1.24 and 12.5.17, processed waste soil has very few usage applications and limited disposal options only at EA EPR permitted sites. Use of soil/aggregates at the site of production is one use. Use of soil/aggregates in certain construction projects may be authorised under exemptions or CLAIRE/DoWCoP. Please note that a DoWCoP operation would involve waste requiring usual Duty of Care provisions. There would be very limited or no applications for inert waste to improve agricultural land. And some inert waste will require land filling (e.g. 'filter cake' produced at a soil washing plant – the clay/soil material left after rocks, sand and stone have been extracted. Figures should be considered and revised.

Further information can be found here:
U1 waste exemption: use of waste in construction - GOV.UK (www.gov.uk)
DoW:CoP (claire.co.uk)

3.5 Water Quality

Wastewater, paragraph 4.8.11 (pp 48)
This paragraph states '*However, it is important to recognise that if significant spare capacity is not maintained at WwTWs due to the need to maintain efficiency, upgrades may be required to serve growth.'* Medway Council should also work closely with water companies to identify and plan for future growth to ensure sufficient wastewater treatment capacity.

Further, this paragraph states '*A significant increase in flood risk, storm overflow events and other climate change impacts is likely to seriously impact the efficiency of existing potable and wastewater infrastructure.'*

We believe this statement would benefit from a clearer explanation on the impacts of climate change on water quality. It is important to highlight the need to maintain the resilience of wastewater facilities to protect water quality in the face of climate change. For example, the increased risk of flooding due to climate change could impact water quality by causing more frequent storm overflows. On the other hand, climate change may lead to drier summers, which can result in a reduced dilution of wastewater discharges from reduced water availability.

Water quality and groundwater protection, paragraph 4.8.16 (pp 49) & Policy DM1: Water quality and groundwater
We are pleased to see paragraph 4.8.16 which states 'T*he EU Water Framework Directive has been retained in UK law following the UK's exit from Europe and establishes a framework for the protection of inland surface waters, estuaries, coastal waters and groundwater which is delivered via River Basin Management Plans.*' and Policy DM1 which states *'All new development should have regard to the actions and objectives of appropriate River Basin Management Plans (in Medway, this is the Thames River Basin District) in striving to protect and improve the quality of water bodies in and adjacent to the district. Developers shall undertake thorough risk assessments of the impact of proposals on surface and groundwater systems and incorporate appropriate mitigation measures where necessary.'*

It is encouraging to see emphasis placed on the protection and improvement of water quality in and adjacent to the district. This should contribute significantly to the maintenance and improvement of Water Framework Directive (WFD) status, aligning with the goal of achieving WFD objectives. More importantly, any development should prevent deterioration of surface water quality, and deterioration of WFD status of waterbodies.

3.6 Water Resources

Question 1 (pp 32)
We wish to highlight that Southern Water have a higher water efficiency target of 100 litres per person per day by 2040. If this is to be achieved, then new housing will need even lower values to offset older, less efficient properties. We recommend supporting these higher standards.

Policy DM1: Flood and Water Management
Water supply (pp 51)
This policy states that '*Development within Groundwater Source Protection Zones and Principal Aquifers will only be permitted provided that it has no adverse impact on the quality of the groundwater resource, and it does not put at risk the ability to maintain a public water supply.'* We recommend that this section also states that:

'*Proposals must have regard to the Water Resources Management Plans published by South East Water and Southern Water*.'

Water quality and groundwater protection (pp 51)
We recommend that this statement includes 'and resources' as follows:

'All new development should have regard to the actions and objectives of appropriate River Basin Management Plans (in Medway, this is the Thames River Basin District) in striving to protect and improve the quality ***and resources*** *of water bodies in and adjacent to the district. Developers shall undertake thorough risk assessments of the impact of proposals on surface and groundwater systems and incorporate appropriate mitigation measures where necessary. '*

Policy DM6: Sustainable Design and Construction (pp 67)
This policy states that 'A*ny submission must include details of how it seeks to address energy efficiency to meet building regulations and meet the higher national water efficiency standard of 110 litres/person/day for residential development where possible.*' We welcome the proposal to support tighter standards for water efficiency, however we would highlight Southern Water's target to reach 100 litres per person per day by 2040. If this is to be achieved, then new housing will need even lower values to offset older, less efficient properties. We recommend the following wording:

'Any submission must include details of how it seeks to address energy efficiency to meet building regulations and meet a higher water efficiency standard of ***100*** *litres/person/day for residential development where possible.'*

September 2023

Thames Estuary 2100

Riverside Strategy Approach - Guidance Note Version 3

The purpose of this document is to provide a clear picture of the riverside strategy approach, including:

- what it is and why it is needed
- what to consider as part of developing a riverside strategy approach
- the benefits it can bring and the risks of not adopting it
- best practice examples of how the approach can be applied
- where to find other relevant information and support.

The Thames Estuary 2100 Plan (the Plan) sets out how the Environment Agency and partners can work together to manage tidal flood risk in the Thames Estuary, from now until the end of the century. It is an adaptive plan, ensuring current standards of flood protection provided by the existing tidal defence system are maintained or improved taking into account the effects of climate change, e.g. sea level rise. To do this, existing flood defences along the Thames and its tributaries will need to be maintained and improved, and in many places raised in height by up to 1 metre.

What is the riverside strategy approach?

The riverside strategy approach is needed to ensure the required future changes to the riverside take place in a planned and integrated way. Holistic visions for integrating defence raising and flood protection into placemaking and growth strategies will maximise the potential environmental, social, cultural and economic benefits. It will ensure raising the flood defences takes into consideration the impact on the environment and communities which sit behind them. The ambition is for a joined-up approach for the riverside which empowers local partners to set their visions for a resilient riverside against the increasing risk of flooding as a result of climate change. The riverside strategy approach is key to delivering Outcome 3: creating a better riverside for local communities of the Thames Estuary 2100 Plan.

As a high-level summary, a short video explaining the riverside strategy approach can be found here.

Why do we need it?

Figure 1: Man peering over flood defence wall at Royal Arsenal Heritage Site in Woolwich

or

Figure 2: Setback flood defence with public access to the river at Bridge View walkway, Greenhithe, Kent

In some places, some defences may need to be raised by 1 metre or more. This presents significant opportunities to enhance the riverside environment both where defences need to be raised, but also where they are to be repaired or replaced. Whilst raising the defences in their existing positions could achieve the flood risk management objectives of the Plan, it is likely to be difficult and extremely costly. Crucially, it would not provide any wider landscape or environmental benefits and could introduce structures that would be tall and unsightly, restricting public access and views of the estuary.

The riverside strategy approach advocates early planning, so that developers, landowners and planning authorities can realise the potential to achieve significant public realm and environmental improvements when undertaking flood defence work. This involves:

- recognising that land may be needed to meet flood defence needs in the future and can enable delivery of associated social and environmental benefits

- setting out a vision of what you want the riverside to look like, so that when development or other construction takes place, the vision is used as a guide for how to shape and improve the riverside while raising defences or leaving room for future raising. This could be developed by any key stakeholder but needs to be clear about what is desired for the riverside.

- making the vision a requirement in planning policy

Developing a riverside strategy approach

As outlined in the Thames Estuary 2100 Plan, **riverside strategies need to be in place by 2030**.

This may need to be earlier (around 2025) in some places in the outer estuary to ensure the vision for the riverside is achieved. This is because of the lead time required for raising defences by 2040 downstream of the Thames Barrier and by 2050 upstream of the barrier.

Figure 3 below highlights that the earlier the visions for the riverside are in place, the greater the capacity to deliver wider benefits. The later they are implemented the fewer opportunities there are to create wider benefits alongside flood defence adaptation and raising.

Upgrading a flood defence involves several stages before the actual construction. Early investigations suggest that the entire process can take 10-15 years when environmental surveys, planning, and design are factored in. The earlier that wider benefits are agreed, the more successful their delivery is likely to be. Once survey and design stages are complete, it becomes more difficult and costly to influence any further change. The main risk to Councils and other stakeholders is that without inputting to how the future of a riverside should look, the driving benefit behind any design will be flood risk protection.

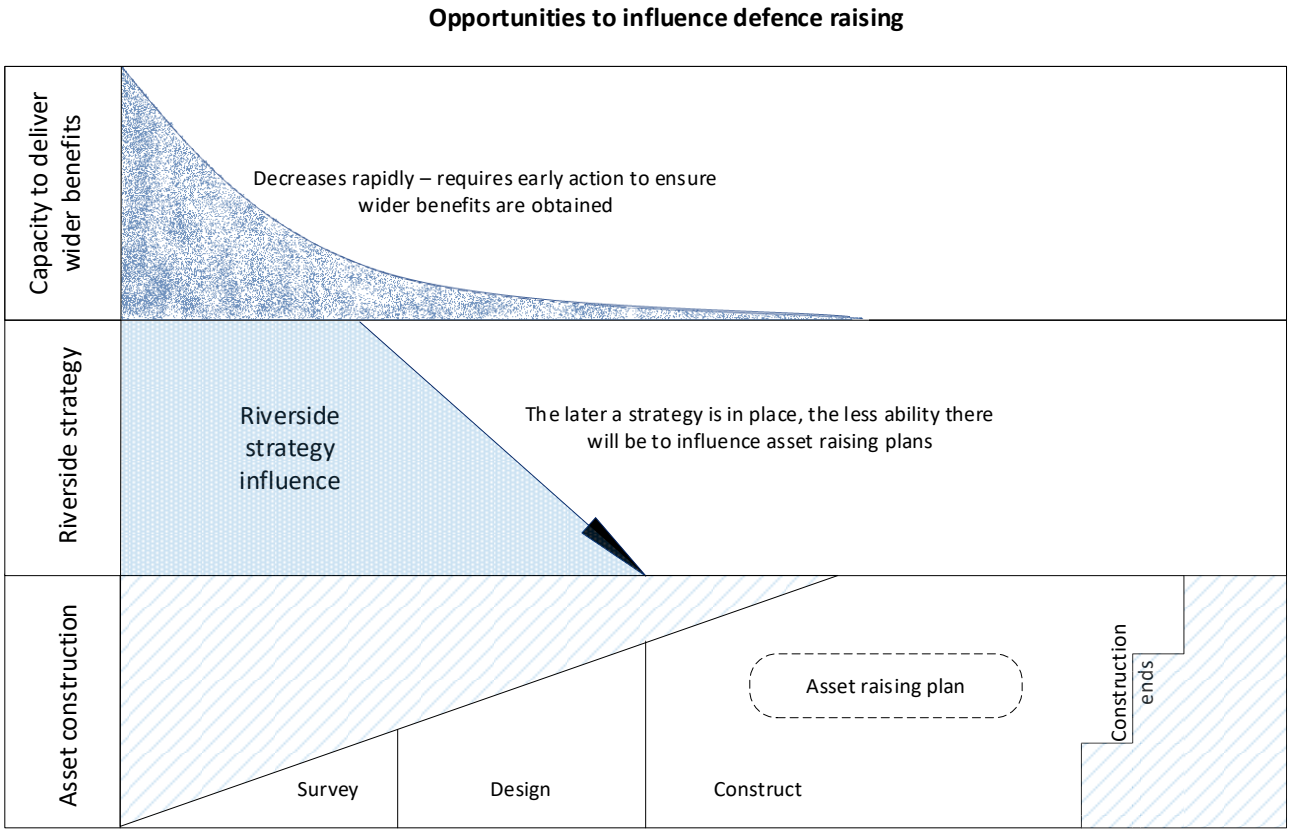

Figure 3: Opportunities to influence defence raising

The 2012 edition of the Thames Estuary 2100 Plan outlined that each council in the Plan area would produce its own standalone riverside strategy document. However, the update of the Plan published in 2023 recognises that there are other ways to adopt the riverside strategy approach. As part of creating Outcome Delivery Plans, we will work with our partners to identify how they intend to embed the riverside strategy approach.

This could be through developing a new standalone document, or via a combination of local plan policies, site allocations, supplementary planning documents, masterplans, planning performance agreements, marine plans, and green space strategies. For London boroughs, Opportunity Area Planning Frameworks (Mayoral supplementary planning guidance to the London Plan) can also play a part.

However, it is important that new documents or strategies complement and enhance existing ones. There is no need to duplicate work if there are already other strategies that can be input into or brought together to meet all of the targets simultaneously.

There is an opportunity to develop your riverside strategy approach through the Joint Thames Strategy Refresh project. This project aims to update the existing Joint Thames Strategies:

- Thames Landscape Strategy Weybridge to Kew
- Thames Strategy – Kew to Chelsea
- Thames Strategy East

Areas not currently covered by one of the Joint Thames Strategies include Central London (Chelsea to Tower Bridge), and the estuary downstream of Gravesend. In these areas, the project will scope the need and potential extension or creation of an alternative Joint Thames Strategy. The project will work across council boundaries with communities, councils, the Environment Agency and other partners.

These landscape visions for the river corridor will include a riverside strategy approach to tidal flood defence upgrades.

The Joint Thames Strategies should be given statutory weight in Local Plans and other statutory planning documents. They are already supported in the London Plan.

To find out more about the Joint Thames Strategies project, contact info@jtsrefresh.com

Another opportunity to develop the riverside strategy approach is through the Port of London Authority's (PLA) masterplanning exercise to realise the growth opportunities along the Thames. The aim is to help integrate the river into the economy and lives of communities as it starts implementing Thames Vision 2050.

What to consider when developing a riverside strategy approach

The Thames Estuary 2100 Plan outlines what would be expected to successfully embed the riverside strategy approach. The following sections provide some additional information around each of the points.

To successfully embed the riverside strategy approach, the requirements are to:

- **engage with the local community so that plans for the riverside consider their needs**

Work with the local community so that development is beneficial to them whilst still meeting flood defence upgrade requirements. This could include obtaining views on the interaction between existing/future public realm and the river to help develop areas that people can enjoy whilst providing the required flood protection.

Riparian owners (landowners who own the land next to the river, including its tidal tributaries) may have to maintain and upgrade the defences in the future. It is important that they are involved in creating the vision for their riverside. Find out more about the responsibilities of riparian owners.

- **engage with neighbouring sites or authorities to ensure that the flood defence line is continuous**

The Thames Estuary defences should be considered as a whole system. This includes the River Thames and its tidal tributaries. All sections need to be joined to each other for the system to be effective. This should be at all scales whether it's as a single site, a stretch of development, a whole council area or greater. Therefore, it is important to engage with neighbouring sites or authorities on the boundary to the area to ensure that any changes in the flood defence line, as a result of raising or the line moving, remains unbroken.

Cross-boundary communication is also important to highlight whether there might be opportunities to group a series of defences for raising or replacing. This could be, for example, for financial reasons or for consistency in design to enhance the local area.

- **include Thames Estuary 2100 height and deadline requirements for upgraded flood defences**

Flood defences will need to be raised to the recommended Thames Estuary 2100 Plan heights to provide the protection set out by the Plan's flood risk policies.

Consider the timing of when improvements need to be made. In delivering Outcome 2: Improving fixed flood defences of the Thames Estuary 2100 Plan, riverside development should incorporate future flood defence requirements. Developers can adapt defences so that they can be raised in the future or raise them early if it is more efficient.

Defences downstream of the Thames Barrier will need to be adapted, raised, realigned, or replaced in line with flood risk management policies by 2040, and by 2050 for defences upstream of the Thames Barrier. It is also important to factor in the lead in time for defence raising.

The Environment Agency will be putting together a targeted resource on height and deadline requirements with further information. In the meantime, if you require specific details for your area, please contact the Thames Estuary 2100 team (thamesestuary2100@environment-agency.gov.uk).

- **include redesigning defences so that upgrades will improve the local area and make it greener**

Existing or planned development behind the flood defences should not be negatively impacted by flood defences, now or in the future.

As part of a riverside vision, you may wish to include how raised defences will look, for example, mapping out a picture of where there will be raising atop existing defences, replacement of existing defences with new defences (with opportunities to redesign them), or setback of the defence line further inland.

The riverside vision should consider future-proofing for future defence raising. For example, this should consider the defence level and respective land/ground level so that access to buildings is not affected in the future.

- **identify land that will be required for future defence improvements and ensure this land will be available when needed**

Outcome 12 Securing Land for Thames Estuary 2100 sets out how we will work with partners to manage flood risk and develop a Land Strategy that will set out our approach to securing land for future flood risk purposes and support planning for resilient and safe development.

Land Plans will feed into this Land Strategy. These land plans will set out choices for how, when, and where to assemble land. Land will be required for access, for inspection, maintenance, and improvements to defences. We also need land for any of the end-of-century options for the future of the flood defence system. All of these options currently remain live as part of the adaptive long-term planning approach. A decision will be made on the end-of-century option by 2040.

The first land plan to be developed will identify land for future Thames barrier options.

More information can be found here.

- **specify where development must be set back from the river to provide space for work on defences, access to the river and habitat**

Development should be set back from the river to provide space for maintenance, future defence raising, access to the river and new habitat. The benefits of accessing the river and having space for habitat are outlined in the bullets below.

Any development within 16 metres of the landward toe of a tidal flood defence is subject to Environment Agency permitting: Flood risk activities: environmental permits - GOV.UK (www.gov.uk). This includes development within 16m of underground structures such as tie rods. An environmental permit is separate to and in addition to any planning permission granted. It should be noted that the width of land that should be secured for future flood risk management interventions along the Thames could be more than 16 metres.

For example, at Castle Point, where the sea wall infrastructure along the site frontage is essential for managing tidal flood risk for the whole island, new development has a ‘no build zone’ of 19m to be maintained landward from the toe of the existing tidal defences to cater for future raising works in 2040 and 2070. It will also ensure future maintenance of both the current and raised future defences can be carried out.

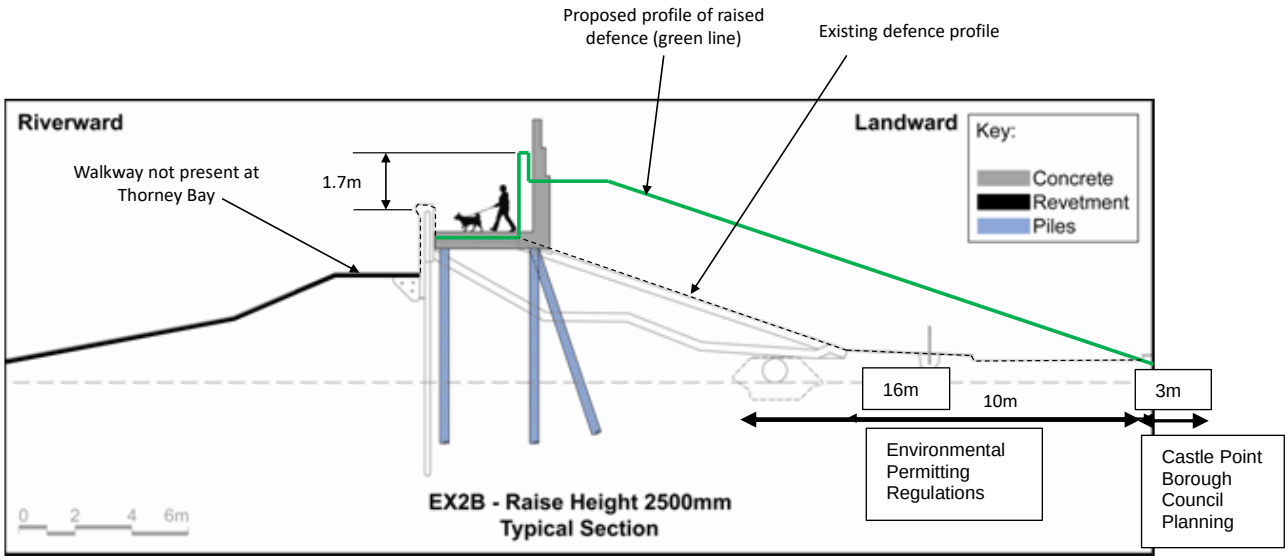

Figure 4: Plans for Castle Point

- **set out your approach to sustainability, nature recovery, and biodiversity and environmental net gain**

Many of the boroughs and councils in the Thames Estuary 2100 Plan area have declared a climate emergency and set out goals and targets across a range of measures. These goals and targets can be incorporated in the riverside vision as part of responding to the emergency declaration, whilst addressing flood risk and enhancing the local area.

Setting out your approach to the above-mentioned topics in your riverside strategy approach will help to ensure that your aspirations for these wider benefits are delivered. Biodiversity Net Gain (BNG) is mandated under the Environment Act with an as yet unconfirmed start date of November 2023.

The Estuary Edges website has useful guidance to help with your approach to social, cultural, and environmental benefits. It includes a 'design principles' section relating to the following topics: encroachment, master planning, archaeology and heritage, education and culture, wildlife, green spaces, fish, navigation, sustainability and adaptability. Each of these themes aligns with one of the Thames Estuary 2100 Plan aims.

- **identify opportunities to create and enhance intertidal habitat**

Habitats along the length of the Tidal Thames are threatened by sea level rise, "coastal squeeze" and erosion due to the presence of shoreline defences which prevents the intertidal habitats migrating on-shore to higher elevations on the natural floodplain.

There are opportunities while replacing, maintaining and raising defences for intertidal habitat to be enhanced or created where appropriate. Some of these are legal duties, in relation to the Habitat Regulations for example, and some are needed to meet Environment Agency policy requirements.

Flood defence owners should create connected habitats as flood defences are upgraded. Connected habitats do not only have to be on the waterside of defences; land habitat connectivity is also important. This should align with local nature recovery strategies.

- **enable people to have uninterrupted access to the riverside with views of the river**

Local communities and river users should have quality and uninterrupted access to the riverside so that they remain connected to the river and are not cut off by higher flood walls.

Being able to see and access the river has huge social and environmental benefits. By incorporating access to the river in a riverside vision it will help in maintaining and enhancing protected and valued views of the river.

- **include measures for the Thames Path to run continuously throughout the estuary**

Riverside strategies should ensure that local communities and river users have quality and uninterrupted access to the riverside, and the Thames Path can run continuously throughout the Estuary. This should also include measures for maintaining and enhancing the Thames Path.

The above points outline the minimum requirements in taking a riverside strategy approach but are not exhaustive. There could be any number of other topics to include in a holistic vision for the riverside. These may include, but not limited to:

- heritage considerations
- interaction with development as it comes forward
- public spaces along the river e.g. building places that people can enjoy
- green spaces along the river
- greening of flood defences
- health and social benefits of an enhanced riverside
- timing of raising/adaptive approach
- river users/navigation
- design guidance for how defences should be raised

Who needs to be involved?

The riverside strategy approach should work in conjunction with any relevant strategies and be developed in collaboration with local stakeholders.

To be successful, this needs to be led by organisations who are shaping the riverside. This includes, but is not limited to, local planning authorities, developers, and other organisations with a planning remit, such as the Greater London Authority (GLA). More cooperation, coordination and collaboration among stakeholders is required and encouraged.

You can find out more about your role and responsibilities in the Thames Estuary 2100 Plan.

Funding a riverside strategy

Although the Environment Agency isn't offering any specific funding to help our partners take a strategic approach to developing the riverside, we're happy to help explore other funding sources that might be available. We can provide valuable evidence to support funding discussions and assist partners to build a strong case for financial support.

The Thames Estuary 2100 Plan area is home to some of England's most socially deprived communities, and investing in a riverside strategy could help enhance these areas and promote natural capital. This investment can also help local authorities achieve their growth ambitions and unlock opportunities for external funding. There are many benefits to taking a strategic approach to the riverside, outlined in the section below.

What are the benefits?

Overall, taking a riverside strategy approach will give a riverside for the 21st century, resilient to climate change. The benefits that are gained will depend on the measures taken. However, one of the key aspirations of a riverside strategy approach is that it can deliver multiple wider benefits. The below diagram outlines examples of benefits that can be achieved.

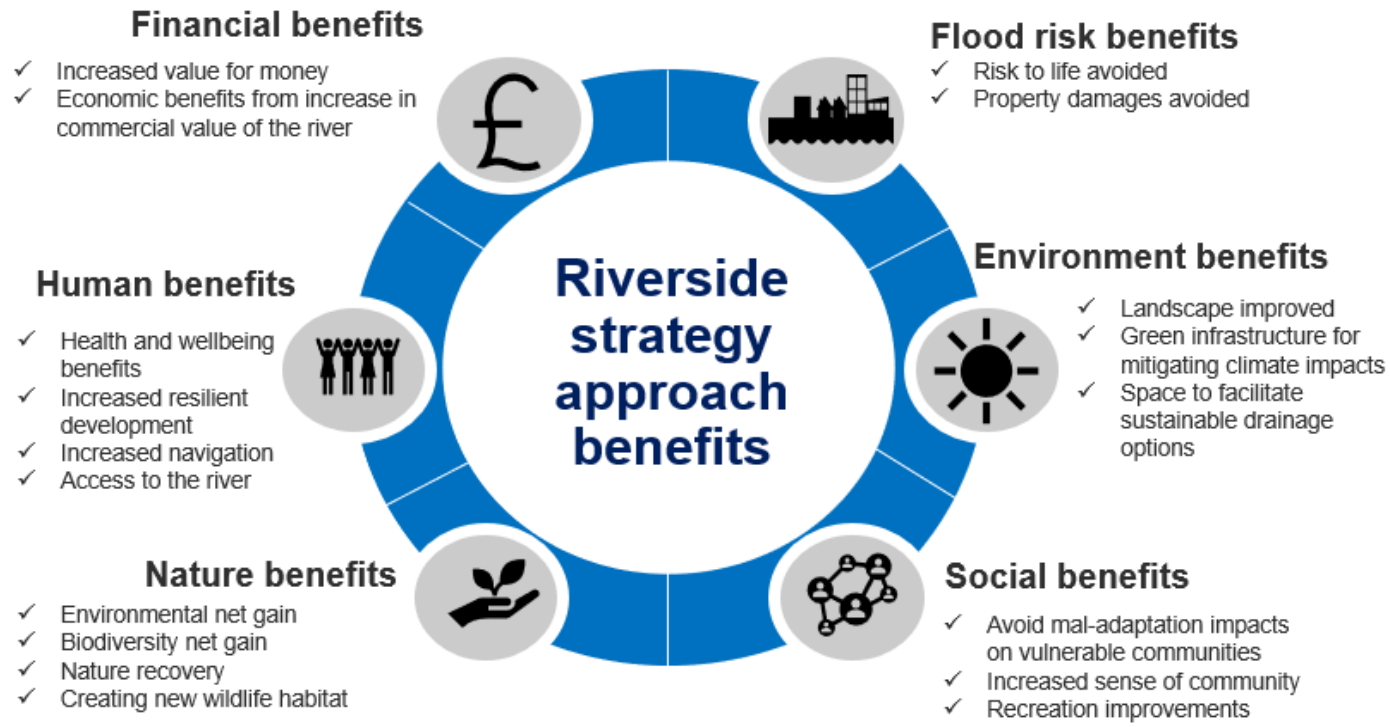

Figure 5: Riverside strategies benefits

An inclusively designed riverside will lead to better designed defence upgrades and therefore multiple benefits being achieved. This will lead to greater sustainability of riverside in the longer term.

What are the risks of not planning for future changes to the riverside in a more strategic way?

If the riverside strategy approach is not incorporated, there are major risks for future changes to riversides. These risks include but are not limited to:

- flood defences raised with only the minimum functional requirement in mind, without integrating design with the surrounding area
- defence raising and upgrades are at a much greater cost to public and 3rd party spending due to challenges arising from a lack of planning for future requirement. This could delay putting measures in place, meaning communities become vulnerable to flooding
- public access and views of the Thames are restricted, disconnecting people from enjoying a relationship with the river
- flood defence structures become tall and unattractive when raised and result in negative impact on risk management authorities' reputations
- development behind defences suffer from reduced views and poorer land values due to higher defences cutting them off from the river
- opportunities are lost to create a better environment for river wildlife
- works become significantly more difficult and costly as land hasn't been secured for maintenance and the construction/footprint of upgraded defences
- opportunities are lost to regenerate and revitalise the riverside, with chances missed to fund defence works as part of wider developments.

Case studies and examples

As outlined, the riverside strategy approach can be taken through many different avenues. Below are examples of a stand-alone riverside strategy at local authority scale, how the approach can be incorporated in developments at individual site scale and using planning policy to achieve a riverside vision.

Council-scale

The City of London Riverside Strategy is the first strategy to be completed at the scale of a council area. It is specific to the City of London which has a different river frontage to many other local authorities, therefore the principles in this case study act as an example of how the riverside strategy can be implemented; it is not a definitive template.

A case study of the strategy including an outline of the key findings, lessons learned and resources required was produced as part of the 10-Year Review of the Thames Estuary 2100 Plan and is available on the Thames Estuary 2100 SharePoint or on request. It acts as an insight into producing a stand-alone riverside strategy.

Although every stretch of riverside in the Thames Estuary will have different benefits and challenges, the lessons learnt through the City of London Riverside Strategy will be transferable to others and can be taken forward to subsequent riverside strategies.

"Developing the riverside strategy was a fantastic opportunity to learn more about our stretch of the Thames. Speaking to riverside users about what they valued about the space brought real insight into how important it is for Londoners and the real potential for beneficial change. The Thames Estuary 2100 Plan is going to be transformational for the capital and wider estuary, and the City of London Riverside Strategy begins to show what this will look like for our area and how we can use it to make our riverside a better and more resilient place."

Tim Munday, City of London Corporation

Site-scale

Development sites and bridges on the River Lea

Leven Road Gasworks is a large development site on the River Lea where the levels of the whole site will be raised during development to comply with defence raising requirements (Figure 6). Raising site levels comprehensively will allow uninterrupted views of the river and safeguard the potential use of the riverside for moorings and vessel access. This has also greatly increased the deliverability of the proposed Mayer Parry Bridge, one of a series of 8 bridges across the River Lea being delivered in partnership by London Borough of Tower Hamlets and London Borough of Newham. Raising site levels has greatly assisted the design and deliverability of the bridge by halving the length of the approach ramp.

Leven Road Gasworks has enhanced the experience of future residents and visitors, and facilitated a much-needed bridge connection across the river, while ensuring that the site will continue to benefit from a high standard of flood protection as the climate changes and sea levels rise. This is an example of how the riverside strategy approach can be effectively embedded in site design.

In contrast, at Calico Wharf development site, the flood defence strategy is to retain the existing ground level and allow for future raising of the river wall. This has been especially problematic around a section of lowered towpath under the proposed Lochnagar bridge – see figure 7 below. Here, the future raising of the flood defence wall will block views and light, potentially creating a poor environment in the future. It has also resulted in a longer and more difficult design stage for the bridge itself, as the approach ramps would be unacceptably long. The bridge will require an opening mechanism to allow vessels to pass under at the required height, increasing the complexity of the bridge, and significantly increasing the capital and maintenance costs.

Figure 6: Visualisation of Mayer Parry Bridge

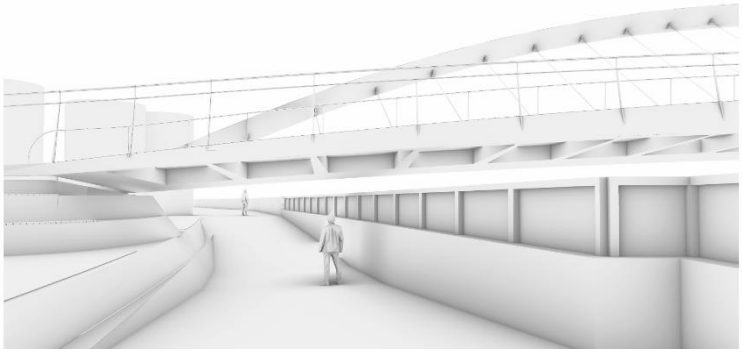

Figure 7: Visualisation of lowered towpath under Lochnagar Bridge with future raised defences cutting off views

Tate Modern

The Thames riverside in front of the Tate Modern on London's Southbank is a good example of how flood defences can be incorporated into the riverside in an unobtrusive way.

The river wall is lower here than on neighbouring stretches of riverside, with the building itself set back from the river's edge and raised. Instead, the flood defence line runs further inland, and consists of steps and a ramp which raises up to the front of the building and is incorporated into the landscaping. This creates a high-quality public space with open views over the river, with planting, seating, and open spaces often used for exhibitions or street performers, as well as allowing the continuation of the Thames Path.

At high tide, the Thames Path and open spaces in front of the Tate may be flooded, but the building itself is unaffected. In future, when we need to raise these defences as part of the Thames Estuary 2100 Plan, we can do this by further adapting the public space which avoids creating a hard barrier between the river and the riversides, is less invasive and significantly cheaper than building in the river itself.

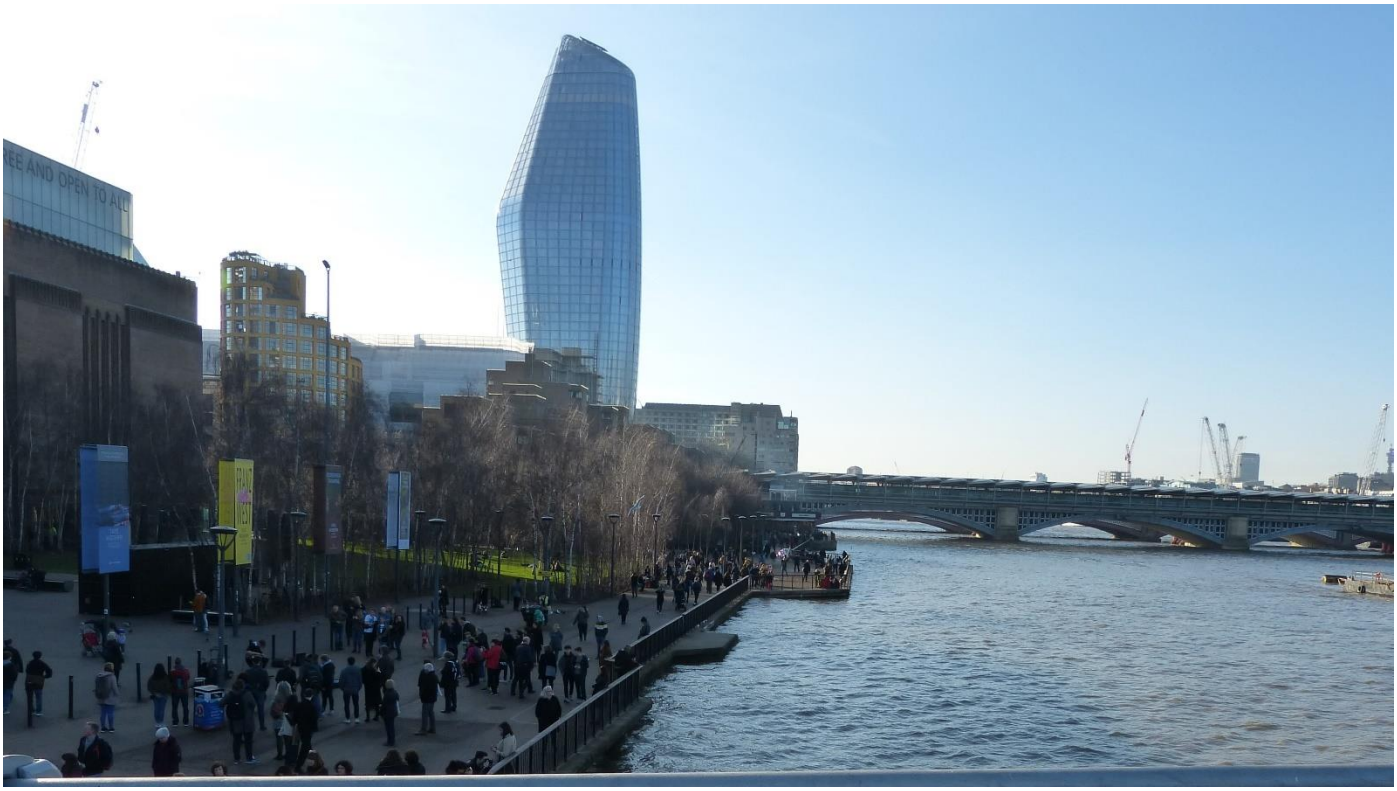

Figure 7: Picture of Tate Modern

Inclusion in policy

For a riverside vision to be successfully implemented, it needs to be supported by planning process, such as with inclusion in a Local Plan.

A good example of where this has been included within a Local Plan is Wandsworth's Local Plan (Regulation 19) January 2022:

"15.55 Developments should also take into account the requirements of the Thames Estuary 2100 (TE2100) Plan and its riverside strategy approach with regard to the implementation of current and future improvements to the River Thames tidal flood defences in order to effectively manage tidal flood risk over the plan period. This includes the requirements of the TE2100 Plan to raise all tidal flood defences, together with an ongoing programme of inspection, maintenance, repair, and replacement of defences as required in accordance with the advice of the Environment Agency. In doing this, the defences should be designed to enhance the riverside environment to achieve significant improvements to public spaces, access to the River and the Thames path, and the creation of new habitats in accordance with the riverside strategy approach of the TE2100 Plan."

What support can the Environment Agency provide?

The Thames Estuary 2100 Team will be happy to provide support in developing riverside strategies and incorporating the riverside strategy approach. Any questions should be directed to: ThamesEstuary2100@environment-agency.gov.uk

Every borough and council along the Thames estuary has a unique river frontage and will have different needs and visions. The Environment Agency is keen to tailor support to the different needs of each borough or council to enable ownership of their riverside strategy and its benefits.

More specifically, we can:

• Advise where defences will need to be raised in the future, by when and to what height.

• Advise on where land is required for our inspection and maintenance of flood defences, including flood walls and flood gates.

• Advise on where land is required for other flood risk management purposes such as a future Thames Barrier or to provide intertidal habitat creation for biodiversity and flood management benefits.

• Advise on the appropriateness of plans and designs.

• Advise where works to defences are likely to take place under the Thames Estuary Asset Management 2100 (TEAM2100) current programme of works.

• Help to co-ordinate conversations between councils and other partners where their riverside visions meet.

• Support opportunities for partnership working to develop shared visions for the riverside with stakeholders such as: the Greater London Authority, local planning authorities and landowners.

• Share successes from elsewhere in the Estuary.

If you require more data, you may be passed on to another team who will be better placed to help.

Our Sustainable Places Teams will be happy to provide support to councils when updating Local Plans in order to incorporate the riverside strategies approach. Any questions should be directed to the relevant local team:

- Hertfordshire & North London: hnlsustainableplaces@environment-agency.gov.uk
- Kent & South London: kslplanning@environment-agency.gov.uk
- East Anglia: planning.eastanglia@environment-agency.gov.uk

Thames Estuary 2100: 10-Year Review Sustainability

Sustainability Framework (Product 6.4)

Final

February 2023

We are the Environment Agency. We protect and improve the environment.

We help people and wildlife adapt to climate change and reduce its impacts, including flooding, drought, sea level rise and coastal erosion.

We improve the quality of our water, land, and air by tackling pollution. We work with businesses to help them comply with environmental regulations. A healthy and diverse environment enhances people's lives and contributes to economic growth.

We can’t do this alone. We work as part of the Defra group (Department for Environment, Food & Rural Affairs), with the rest of government, local councils, businesses, civil society groups and local communities to create a better place for people and wildlife.

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Email: enquiries@environment-agency.gov.uk

Document History

Version	Purpose	Originated	Reviewed	Date
0.1	Draft for review	E. Smyth A. Hewson C. Robaldo-Bishop	C. Robaldo-Bishop D. Cuthbertson L. Littleton	18/02/2022
0.2	Update for The Plan publication	E. Smyth A. Hewson	D. Cuthbertson	14/02/2023

Executive Summary

The Thames Estuary 2100 Plan (the Plan) sets out how Thames Estuary partners can work together to manage flood risk within the estuary. However, the Plan was first published in 2012, three years before member states adopted the UN Sustainable Development Goals (SDGs). Therefore, whilst the original Plan's objectives include elements of sustainability, sustainable development concepts were not fully embedded within the Plan. Additionally, the original Plan presently does not align with more recent developments within sustainability. Therefore, the purpose of this report was to develop a Sustainability Framework for the Thames Estuary 2100 Plan, specifically setting out the vision and principles for how the updated Plan will deliver and promote sustainability within the estuary over the next century. The Sustainability Framework also needed to outline the core goals and recommendations that the updated Plan will need to work towards to deliver an effective sustainability approach to flood risk management across the estuary.

The field of sustainability has evolved significantly since the launch of the first Plan, resulting in a number of legislative and organisational commitments that were not originally accounted for within the Plan. A review of relevant sustainability literature was therefore undertaken as part of the development of the Sustainability Framework. The review established that implementing sustainability within the Thames Estuary will be achieved through either legal compliance or organisational conformance. Thus, UK legislation, government commitments, standards and Thames Estuary Partner commitments related to sustainability were reviewed to direct the development of the Sustainability Framework. Through this review a number of sustainability themes were identified, this included the themes of climate emergency, carbon management, circular economy, nature emergency, social outcomes, and the UN Sustainable Development Goals (SDGs) as an overarching theme. These themes were then embedded within the development of the Sustainability Framework to ensure that the framework aligned with the latest sustainability priorities.

Based on these themes, the vision and principles of the Sustainability Framework were developed and aimed to set out the ambition, priorities, and the direction for delivering sustainability within the estuary over the lifetime of the updated Plan. This required a sustainability vision that clearly depicted what the Thames Estuary will look like in the future, under the Plan's delivery, whilst the sustainability principles set out the fundamental guidelines for delivering sustainability under the Plan. To establish a clear vision and principles, iterative discussions were then held with the Sustainability Working Group and the Advisory Group. This enabled the vision and principles to be developed collaboratively whilst also being rooted in the latest thinking on sustainability.

A collaborative question-generating exercise was subsequently undertaken by the multi-disciplinary Sustainability Working Group (SWG) to map out the key sustainability questions that the Plan will need to answer under each theme, over the lifetime of the Plan. A technical summary was subsequently developed based on each question to establish key priorities and opportunities for the Plan. Key sustainability goals were established from this technical summation, under each theme and further reviewed by the SWG. These goals are central drivers to achieving sustainability through the framework and are supported by further recommendations that provide the key next steps and practical direction for actioning the goals. Embracing the vision, principles, goals, and recommendations of the Sustainability Framework being presented, will guide decision-making within the Thames Estuary and drive intelligent, innovative, and creative solutions towards achieving a sustainable approach to flood risk management within the estuary.

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Glossary

Term	Definition	Source
Biodiversity Net Gain (BNG)	Biodiversity Net Gain (BNG) is a legal approach, under the Environment Act 2021 to developments that require planning, which leaves biodiversity in a better state than before i.e. provides an 'increase in appropriate natural habitat and ecological features over and above that being affected' (by at least >10%). It is also mandated through the National Planning Policy Framework. *Note: BNG still relies on the application of the Biodiversity Mitigation Hierarchy.*	CIEEM (Accessed 2022).
Biodiversity mitigation hierarchy	The biodiversity mitigation hierarchy by Defra is a systematic approach to addressing biodiversity impact and its potential compensation through offsetting. This hierarchical structure first seeks to avoid impacts, then to minimise them, then takes on-site measures to rehabilitate or restore biodiversity, before finally offsetting residual and/or unavoidable impacts. In the implementation of required offsets, the minimum objective should be to provide biodiversity net gain (for applicable developments).	UK Parliament Post Note: Number 369 January 2011. Biodiversity net gain. Good practice principles for development (CIRIA).
Circular economy	In our current economy, we take materials from the Earth, make products from them, and eventually throw them away as waste – the process is linear. In a circular economy, by contrast, we stop 'waste' being produced in the first place by circulating products and materials (at their highest value), eliminating waste and pollution, and regenerating nature. The circular economy is underpinned by a transition to renewable energy and materials and decouples economic activity from the consumption of finite resources.	The Ellen MacArthur Foundation Website (Accessed 2022).
Climate emergency	A situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.	Oxford Dictionaries.
Communities	In the context of this report: A community is a social unit (a group of living human beings within society) living in geographic commonality e.g. within a village, town, suburb, city etc. within the Thames Estuary. The wider Thames Estuary (as a whole) can also be considered a community, based on linkages between social norms, work, family structures, governance, identity, values, religion, culture etc., and will also be an important community, for considering estuary-wide initiatives and the linkages between the different areas. Stakeholders and partners are considered separate to communities but may be based within the local community, such as local organisations or interest groups.	Defined by this report. Influenced by: Sustainable Communities, Sustainable Development: Other Pathways for Papua New Guinea (2012).

Cultural adaptation (in infrastructure)	In the context of infrastructure: Cultural adaptation involves embedding ambitious and creative socio-cultural viewpoints and values into infrastructure designs that deliver the broader benefits of social value, to adequately and appropriately deliver the socio-cultural needs of a given area. This also improves community resilience.	Defined by this report. Influenced by: Cultural Adaptations Website (accessed 2022) and ICE Maximising Social Value from design (2020).
Cumulative emissions	The total amount of emissions released over a specified period of time.	IPCC (2018).
EDI-focused procurement	Maintaining focus on equality, diversity, and inclusion within the procurement process (and pre-planning stages for procurement). Such as through diversifying supply chains, creating a more diverse and inclusive workforce, or specifying social value reporting within contracts.	Defined by this report. Influenced by The Social Value Model (2020) and The Education and Training Foundation (2017-2020).
Enable a Natural Capital Approach (ENCA)	A natural capital approach to policy and decision making considers the value of the natural environment for people and the economy. The resources for the Department for Environment, Food & Rural Affairs' (Defra) Enabling a Natural Capital Approach (ENCA) includes data, guidance, and tools to help you understand natural capital and know how to take it into account.	Defra (2020).
Environmental net gain (ENG)	Environmental net gain (ENG) is the concept of ensuring that infrastructure developers leave the environment in a measurably better state compared to the pre-development baseline. It involves expanding the net gain approaches used for biodiversity net gain (BNG) to include wider natural capital benefits, such as flood protection, recreation, other social value benefits and improved water and air quality (and the interactions between these). Those approaches will sit alongside existing regulations that protect our most threatened or valuable habitats and species. They will enable local planning authorities to target environmental enhancements that are needed most in their areas; and give flexibility to developers in providing them.	National Infrastructure Commission (NIC) & CIEEM (Accessed 2022).
Environmental Land Management Strategy (ELMs)	Central to Defra's proposals is the Environmental Land Management scheme (ELMs), the primary mechanism for distributing the funding previously paid under the common agriculture policy (CAP). Instead of the CAP direct payments, ELMs will pay farmers for undertaking actions to improve the environment. It has three components, each of which will be launched in full in 2024: • Sustainable Farming Incentive (SFI) • Local Nature Recovery • Landscape Recovery These schemes are intended to support the rural economy while achieving the goals of the 25 Year Environment Plan and a commitment to net zero emissions by 2050. They support soil recovery and help to regenerate biodiversity.	Defra (2021) / National Audit Office (NAO).

IEMA greenhouse gas management hierarchy	A hierarchy for guiding the management of carbon emissions to net zero. Focuses on tackling significant and 'at-source' carbon emissions before jumping straight to a carbon offset solution (e.g. in the order of eliminate, reduce, substitute, compensate).	IEMA, 2020.
Levelling up	Levelling up is a UK government commitment, backed by the Levelling Up White Paper. This commitment requires us to end geographical inequalities, which are a striking feature of the UK. Levelling up along the River Thames Estuary will mean addressing the inequalities that affect the different societies within the Thames Estuary so that there is equal access to opportunity, and everyone can flourish.	Defined by this report. Influenced by the Department for Levelling Up, Housing and Communities (2022) and The Thames Estuary Growth Board 2021.
Multiplier effect	Multiplying a range of effects (in this case benefits within the Thames Estuary) from addressing a single component.	Defined by this report.
National Planning Policy Framework (NPPF)	The revised National Planning Policy Framework (NPPF) sets out government's planning policies for England and how these are expected to be applied.	Ministry of Housing, Communities and Local Government (2021).
Natural capital	Natural capital can be defined as the world's stocks of natural assets which include geology, soil, air, water, and all living things. It is from this natural capital that humans derive a wide range of services, often called ecosystem services, which make human life possible. For example, a woodland would be a natural capital asset, but the benefits it provides such as flood risk reduction, or carbon capture would be ecosystem services.	Natural Capital Forum (Accessed 2022) and Ecosystems Knowledge Network (Accessed 2022).
Natural capital accounting	Natural capital accounting is a tool to measure the changes in the stock of natural capital at a variety of scales and to integrate the value provided by ecosystem services into accounting and reporting systems at international and national level. These can be material benefits (e.g. food, raw material etc.), regulatory (e.g. air, soil, water, and climate) or non-material (such as cultural, recreational, or aesthetic).	The European Commission (2022) and defined by this report.
Nature emergency	A situation in which urgent action is required to reduce or halt the loss of our natural world and avoid potentially irreversible damage to natural, financial, social capital resulting from it. We are in the middle of a climate and nature emergency, and the two are inextricably linked. Climate change is driving nature's decline, and the loss of wildlife and wild places leaves us ill-equipped to reduce carbon emissions and adapt to change. One cannot be solved without the other.	Defined by this report and The Wildlife Trusts (Accessed 2022).
Natural flood management (NFM)	Natural flood management (NFM) is when natural processes are used to reduce the risk of flooding and coastal erosion (as part of a nature-based solutions approach). NFM works best when a 'catchment approach' is taken. Some examples include restoring meanders in rivers, leaky dams, changing the way land is managed so soil can absorb more water, creating saltmarshes or seagrass meadows on the coast to absorb wave energy etc.	Environment Agency Press release: Natural flood management – part of the nation's flood resilience (2017).

Net zero	Put simply, net zero refers to emitting no more greenhouse gases (i.e. carbon dioxide) to the atmosphere than we remove from the atmosphere. We reach net zero when the amount we add is no more than the amount taken away. Net zero by 2050 is an ambition set under the UK Climate Change Act (amended 2019) under global commitments to reduce the levels of greenhouse gases (specifically carbon dioxide) in the atmosphere by 100%, relative to 1990 levels, by 2050. The Environment Agency EA2025: Creating a Better Place and eMission2030 strategies hold the Environment Agency target to reach carbon net zero, including in its operations and supply chain. The Environment Agency will also explore whether it could become an absolute zero organisation – eliminating all carbon emissions, from its own activities and its supply chain, by 2050.	Defined for this report. Influenced by: EA2025 (2020), eMission2030 and the Climate Change Act (Amended 2019).
Participatory design	Participatory design is a process that includes the stakeholders in the earliest stages of design. The inclusion of stakeholders and end users together allows the design process to be more effective and the results more usable and appropriate. This is a process of creating reciprocal working relationships that empower stakeholders, designing in such a way that enables people to have a stake in their own solutions. Rather than designing for passive users, it is a process of elevating all stakeholders to active participants in the design process through early and iterative consultation.	Defined by this report. Influenced by ICE: Maximising Social Value from design (2020) and The Design Toolkit (Accessed 2022).
Partners	In the context of this report, partners are those which will work closely with us to deliver the Plan through shared resources, funds, goals, plans and strategies i.e. Local Councils, Lead Local Flood Authorities (LLFAs), Port of London Authority (PLA), Royal Society for the Protection of Birds (RSPB), Marine Management Organisation (MMO), Natural England (NE) etc.	Defined by this report.
Place-based needs	Addressing needs based on the individual needs of a given place i.e. local geographical population from a village, town, area, city etc. Includes all needs including ecological, social, human, financial and manufacturing needs. Creating a sense of place or adding place-based value, requires communities to be involved in developing a place-based approach that suits their own needs.	Defined by this report. Influenced by The Royal Docks Team, The County Councils Network (CCN) (Accessed 2022); and Social Value in Regeneration (GLA, 2020).
Protected characteristics	Characteristics that the Equality Act 2010 protects, include: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, and sexual orientation.	Equality Act 2010.
Resilience / climate resilience	Climate resilience is the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate. Reducing the vulnerability of communities can bolster climate resilience.	Centre for Climate and Energy Solutions (C2ES) (Accessed 2022).

Social architecture	Social architecture is architecture that serves a community; addresses inequities in society; and responds to climatic, cultural, and environmental conditions that can be considered socially responsive. Socially responsible design goes beyond aesthetics and function—it emphasises interaction between structure and people. Infrastructure is part of social architecture and crucial urban planning responses.	Construction Week Online, and the Royal Institute of British Architects (RIBA). Accessed 2022.
Social equality	Social equality means giving everyone the same opportunities i.e. equal access to green space, or ensuring everyone is equally informed about, and included in job/recreation opportunities.	www.social change.co.uk (Accessed 2022).
Social equity	Social equity is not the same as equality, nor is it the same as inequality. It is simply about recognising different needs at a systemic level and giving more to those who need it, which is proportionate to their own circumstances, to ensure that everyone has the same opportunities. For example, designing to reduce underlying inequalities through infrastructure or, giving more support to a disadvantaged student so they can reach their potential.	www.social change.co.uk (Accessed 2022).
Social value	Social value is the quantification of the relative importance that people place on the changes they experience in their lives. Some of this value is captured in market prices but other examples might be the value we experience from increasing our confidence, or the wellbeing we experience from living next to a community park.	Social Value UK.
Social integration	A social outcome is the result of creating an impact, (for instance from infrastructure), which positively or negatively affects society. Positive social outcomes might result from the delivery of social value and achieving social equity across a specific locality or more broadly across a wider area within the Thames Estuary, for instance.	Defined for this report.
Social outcomes	A social outcome is the result of creating an impact, (for instance from infrastructure), which positively or negatively affects society. Positive social outcomes might result from the delivery of social value and achieving social equity across a specific locality or more broadly across a wider area within the Thames Estuary, for instance.	Defined for this report.
Stakeholders	A stakeholder is anybody who can affect or is affected by an organisation, strategy, or project. In the context of the Thames Estuary 2100 Plan these will include the small and large voices from local community groups, up to the wider regional, or national groups. A diverse and inclusive Stakeholder Engagement Plan (SEP) will define these stakeholders in the context of the Plan.	Defined by this report.
Sustainability	In the broadest possible sense, sustainability refers to the ability of something to maintain or "sustain" itself over time. More accurately, sustainability is a broad policy concept and consists of three main ‘dimensions’ or ‘pillars’: environmental, economic, and social. All three need to be in balance and sustained for future generations to achieve sustainability. To reach a state of sustainability can be considered a long-term objective, whilst sustainable development is considered to consist of the many pathways, processes and procedures required to reach the point of sustainability.	Defined by this report. Based on UNESCO and the three pillars of sustainability: in search of conceptual origins (2019).

Sustainability Champion	Sustainability Champions act as advocates for sustainability in their area of work, course, societies and residence, and work with others to embed good practices. Sustainability Champions are committed to breaking down the silos in education institutes, organisations, companies [and communities] to demonstrate that everybody has a role to play in sustainability.	Alliance for Sustainability Leadership in Education, 2022.
Sustainability Working Group (SWG)	A steering group set up within the Thames Estuary 2100 10-Year Review to assess and advise on sustainability work being undertaken as part of the 10-Year Review.	Defined by this report.
Sustainable development	Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It concerns the many pathways, procedures and processes required to reach a state of sustainability.	Brundtland report 1987 and UNESCO.
Thames Estuary 2100 10-Year Review Sustainability Framework	A framework that sets out the vision, principles, goals, and recommendations on how the Thames Estuary 2100 Plan (the Plan) will deliver sustainability across the estuary, throughout the Plan's lifetime.	Defined by this report.
UN Sustainable Development Goals (UN SDGs)	The 17 Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 (as part of the UN Sustainable Development Agenda) as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.	United Nations Development Programme (UNDP).
Upskilling	In the context of the Thames Estuary, upskilling of communities, stakeholders, partners, workforces (including our own) as part of programme delivery refers to the learning of new skills, honing of existing skills and improving competencies. It also includes the sharing of knowledge.	Defined by this report.
Users	In the context of this report, users can be defined as: 1) Local communities who 'use' social value from flood defence infrastructure in their daily lives and work. 2) The workers, traders, visitors, tourists that are temporarily passing through (e.g. transient users).	Defined by this report.

Abbreviations

Abbreviation	Definition
ALGG	All London green grid
AR	Assessment Reports
BNG	Biodiversity net gain
BREEAM	Building Research Establishment Environmental Assessment Method
BRIC	Building Resilience in Communities
BSI	British Standard Institute
BUDS	Beneficial use of dredged material
C2C	Cradle to Cradle
C2ES	Centre for Climate and Energy Solutions
CAP	Common Agriculture Policy
CCF	Coastal Communities Fund 2018
CCRA3	Third UK Climate Change Risk Assessment
CEEQUAL	Civil Engineering Environmental Quality Assessment & Award Scheme
CEP	Circular Economy Package
CIEEM	Chartered Institute of Ecology and Environmental Management
CIRIA	Construction Industry Research and Information Association
CO_2	Carbon dioxide
CoL	City of London
COP15	15th meeting of the Conference of the Parties
CSR	Corporate social responsibility
Defra	Department for Environment, Food & Rural Affairs
EA	Environment Agency
EDI	Equality, diversity, and inclusion
EIA	Environmental Impact Assessment
EIC	Environmental Industries Commission
ELMs	Environmental Land Management Strategy
ENCA	Enable a Natural Capital Approach
ENG	Environmental net gain
FCERM	Flood and coastal erosion risk management
FSB	Federation of Small Businesses
GGCs	Greening Government Commitments

GI	Green infrastructure
GHG	Greenhouse gases
GLA	Greater London Authority
GRI	Global Reporting Initiative
ICE	Institution of Civil Engineers
ICT	Information Communication Technology
IEMA	Institute for Environment Management & Assessment
IMO	International Maritime Organisation
INNs	Invasive Non-Native Species
IPCC	The Intergovernmental Panel on Climate Change
ISO	International Organisation for Standardisation
IUCN	International Union for Conservation of Nature
JP	Joint publication
KPIs	Key performance indicators
LEDs	Light-Emitting Diode
LLFA	Lead Local Flood Authority
LNRSs	Local Nature Recovery Strategies
LSDC	London Sustainable Development Commission
MENE	Monitor of Engagement with the Natural Environment
MMO	Marine Management Organisation
NAP	National Adaptation Programme
NAO	National Audit Office
NBS	Nature-based solutions
NCA	Natural capital approach
NDCs	Nationally determined contributions
NE	Natural England
NECR	Natural England Commissioned Reports
NFM	Natural flood management
NIACE	National Institute of Adult Continuing Education
NIC	National Infrastructure Commission
NMU	Non-motorised users
NPFF	National Planning Policy Framework
NRN	Nature Recovery Network
ONS	Office for National Statistics

PAS	Publicly Available Specification
PLA	Port of London Authority
PRoW	Public Rights of Ways
PSED	Public Sector Equality Duty
RFCC	Regional Flood and Coastal Committee
RIBA	Royal Institute of British Architects
RNLI	Royal National Lifeboat Institution
RSPB	Royal Society for the Protection of Birds
RTFO	Renewable Transport Fuels Obligations
RWS	Resources and Waste Strategy
SAC	Special Areas of Conservation
SBTi	Science Based Target Initiative
SDGs	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SEE	South Essex Estuary
SEP	Stakeholder Engagement Plan
SFI	Sustainable Farming Incentive
SMEs	Small to Medium Enterprises
SPA	Special Protection Areas
SROI	Social return on investment
SSSI	Sites of Special Scientific Interest
STEM	Science, Technology, Engineering, and Mathematics
SuDS	Sustainable Urban Drainage Systems
SWG	Sustainability Working Group
SYR	Synthesis Report
TfL	Transport for London
TNFD	Taskforce on Nature-related Financial Disclosures
UGF	Urban Greening Factor
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UKFSCC	UK Farm Soil Carbon Code
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

UN SDGs	United Nations Sustainable Development Goals
ZSL	Zoological Society of London

1. Introduction

The Thames Estuary 2100 Plan (the Plan) sets out how Thames Estuary partners can work together to manage flood risk within the estuary. The Plan will ensure that 1.4 million people and £320 billion worth of property and critical infrastructure are protected from increasing tidal flood risk. In addition to managing flood risk the Plan looks to identify opportunities to create better access for communities to the river, create habitat, and enhance the social, economic, and commercial benefits the river provides. The aims of the original Thames Estuary 2100 Plan were:

- Manage the risk of flooding to people, property, and the environment
- Adapt to the challenges of climate change
- Ensure sustainable and resilient development in the floodplain
- Protect the social, cultural, and commercial value of the tidal Thames, tributaries, and floodplain
- Enhance and restore ecosystems and maximise benefits of natural floods

However, the Plan was first published in 2012, three years before member states adopted the UN Sustainable Development Goals (SDGs). Therefore, though the original Plan's objectives have elements of sustainability, sustainability was not fully embedded within the Plan. Furthermore, the Plan presently does not align with recent developments within sustainability.

Therefore, the purpose of this Product 6.4 is to develop a Sustainability Framework for the Thames Estuary 2100 Plan, specifically setting out the vision and principles for how the Plan will deliver and promote sustainability within the estuary over the next century. This Sustainability Framework also needs to outline the goals the Plan will need to work towards to deliver a sustainability approach to flood risk management across the estuary.

The specific objectives for this product are outlined below, but the full Product Description is outlined in Appendix A:

- A review and discussion on current guidance, best practice approaches and methodologies that need to be followed to incorporate sustainability assessments into the Thame Estuary 2100 Plan delivery
- Review the current thinking and emerging evidence on sustainability themes
- Define a meaning for sustainability and sustainable development in the context of the Plan
- Recommend sustainability principles to be followed in the revised Plan
- Undertake a high-level review of the current sustainability baseline conditions within the estuary
- Outline knowledge gaps and suggest recommendations for delivering sustainability under the Plan
- Outline a timeline for actioning recommendations under the Sustainability Framework

Additionally, the Sustainability Framework should consider the findings within the SEA (Strategic Environmental Assessment) for the Plan. However, a Screening Determination was undertaken as part of the 10-Year Review and did not identify any new findings or significant effects of the proposed options within the Plan. A summary of the current understanding of the SEA is outlined in Appendix B.

2. Sustainability Research

2.1. Introduction

The field of sustainability has evolved significantly since the launch of the Thames Estuary 2100 Plan, resulting in a number of legislative and organisational commitments that were not originally accounted for. This section looks to bring together relevant work that has been carried out to date, outlining how this work has influenced the development of a Sustainability Framework appropriate for the Thames Estuary 2100 Plan.

2.2. Sustainability compliance and conformance

Implementing sustainability within the Thames Estuary will be achieved through either legal compliance or organisational conformance. Legal compliance relates to actions required by law and is enforced by government bodies, whereas organisational conformance is a voluntary commitment to achieving an agreed standard. In the UK there are a number of laws that have been passed related to sustainability, such as the Environmental Act 2021, which legislates achieving at least 10% biodiversity net gain (BNG) for developments requiring planning submissions (see section 2.3 Key sustainability legislation and policies for further detail). The legal requirements under these laws will be the minimum that must be implemented across the Thames Estuary through the sustainability framework. Additional to this are the growing sustainability commitments from various organisations in recent years. These commitments include ambitions such as reaching net zero by 2030, joining the race to resilience before 2050, and achieving environmental net gains for social and environmental objectives. The Social Value Act 2020 was also released, which sets a framework for equitable and diverse procurement for central government supply chains. Though these commitments cannot legally be enforced they set the direction of travel towards a sustainable future. The Sustainability Framework should align with these legal compliances and organisational commitments to ensure that sustainability is effectively implemented and coordinated across the estuary. This alignment strengthens the ability to collaborate with partners to deliver sustainable outcomes throughout the Thames Estuary, whilst strengthening the Plan's status as a world-leading adaptation strategy.

2.3. Key sustainability legislation and policies

As mentioned in Section 2.2, aligning with UK legal requirements and organisational commitments will ensure the Sustainability Framework is adopted and implemented effectively across the estuary. As a result, key UK sustainability legislation, standards, government commitments and Thames Estuary partner's commitments have been reviewed. The full list of relevant sustainability material that was reviewed to develop the Sustainability Framework is outlined in Appendix C. However, though all sustainability material that was reviewed was used to shape the Sustainability Framework, the key documents that aided the development of the framework are outlined below:

- **UK sustainability legislation**
    - Climate Change Act 2008
    - Environment Act 2021
    - Flood and Water Management Act 2010
    - Natural Environment and Rural Communities Act 2006
    - Public Sector Equality Duty Act (PSED)
    - Social Value Act 2012
    - Sustainable Communities Act 2007
    - The Equality Act 2010

- The National Planning Policy Framework (NPPF) revised 2021
- The Waste (Circular Economy) (Amendment) Regulations 2020

- **Sustainability standards**
  - BREEAM (Building Research Establishment Environment Assessment Method)
  - British Standards - British Standard Institute (BSI)
  - Biodiversity mitigation hierarchy (Defra)
  - Greenhouse Gas Protocol 2021
  - IEMA greenhouse gas management hierarchy (updated 2020)
  - ISO 14000 – Environmental standards
  - PAS 2080 – Carbon management in infrastructure
  - The Biodiversity Net Gain: Good Practise Principles for Development 2019
  - The Natural England Biodiversity Metric 3.0 (JP039) and The Small Sites Metric (JP040)
  - UK Farm Soil Carbon Code (UKFSCC) (full release impending)

- **Government commitments**
  - 2030 Agenda for Sustainable Development 2015
  - 25 Year Environmental Plan 2018 (Defra)
  - Adaptation Plan (2018 - 2023) (Defra)
  - Circular Economy Package (CEP) Policy Statement 2020
  - Coastal Communities Fund (CCF) 2018
  - Corporate Environment Plan 2021 (TfL)
  - Enabling a Natural Capital Approach and The Services and Assets Data Book Sets 2021 (Defra)
  - Environmental Land Management Strategy (ELMs) Test and Trial (full release, 2024) (Defra)
  - London Environment Strategy 2018
  - London Resilience Strategy 2020
  - National Adaptation Plan 2018
  - Net Zero Strategy: Build Back Greener 2021
  - Out Waste, Our Resources: A strategy for England 2018
  - Sustainable Development Management Plan 2020-2025
  - Thames Estuary 2050 Growth Commission Report 2018
  - The City of London Riverside Strategy 2021
  - The Clean Growth Strategy 2017
  - The Glasgow Climate Pact 2021
  - The Greater London Authority (GLA) Equality, Diversity, and Inclusion Strategy 2018

- The London Plan 2021
- The Mayor's Strategy for Social Integration 2018
- The National Nature Recovery Network 2020
- The Social Integration Strategy 2018
- The Social Value Model 2020
- UK Marine Plans 2014

- **Partner commitments**
  - All London Green Grid Framework (ALGG) 2012
  - Arts Council England's Creative People and Places
  - EA2025: Creating a Better Place (EA)
  - eMission 2017 (EA)
  - FCERM (2021): Working with natural processes to reduce flood risk (EA)
  - Historic England's Climate Change Strategy 2022
  - Improving Access to Greenspace: Public Health England 2020
  - National Flood and Coastal Erosion Risk Management Strategy 2021 (EA)
  - Natural England Green Infrastructure (GI) Network
  - Natural England Natural Capital Atlas: NECR285 2020
  - Net Zero Roadmap 2021 (EA)
  - Riverside Strategy Approach 2019 (EA)
  - Science Based Target Initiative (SBTI) 2021
  - Healthy Living Streets for London 2017 (TfL)
  - Thames Estuary 2050 Growth Commission: 2050 Vision 2015
  - Thames Estuary Growth Board Green Blue Action Plan 2020
  - Thames Vision 2050 (PLA)
  - The Mayors Green New Deal
  - The Thames Landscape Strategy: Our Vision
  - UNFCCC Race to Net Zero 2019
  - UNFCCC Race to Resilience Framework 2021

2.4. Workstreams under the 10-Year Review

Several workstreams have been developed as part of the Thames Estuary 2100 10-Year Review to analyse the changes since the plan was published, and to assess the impact of these changes to the plan going forwards. The workstreams which have been most influential on the Sustainability Framework include Sustainability, Benefits, Planning & Policy, and Riverside Strategy. These workstreams and their influence on the Sustainability Framework are discussed in the following sections.

2.4.1. Sustainability Workstream

The products under the Sustainability Workstream have helped shape the development of the Sustainability Framework. These include products: 6.1 Carbon Costing and Optimisation, 6.2 Natural Capital Framework, and 6.3 UN Sustainable Development Goals (SDGs).

For 6.1 Carbon Costing and Optimisation reviewed high-level scenarios for carbon reduction with management interventions to fixed flood assets up to 2070, which were used to propose pathways to decarbonisation within the estuary, driven by material changes, technology swaps and future UK decarbonisation policy.

For 6.2 Natural Capital Framework the product undertook an initial assessment of natural capital and identified eighteen ecosystem services of importance within the estuary. However, the aim of the product is to support a complete future natural capital assessment for the Thames Estuary 2100 Plan which will need to consider the quantification and monetisation of the ecosystem services within the estuary.

For 6.3 UN Sustainable Development Goals (SDGs) the product set out how current delivery of the Thames Estuary 2100 Plan contributes to the goals. It also discusses how the Plan can drive progress against these goals over the next decade.

The limitations and gaps identified within these products, under the Sustainability Workstream, were considered when developing the direction and ambitions for the Sustainability Framework.

2.4.2. The Benefits Workstream

This workstream includes Product 8.3 Benefits Management Strategy, which will set out the approach and framework that the Thames Estuary 2100 programme will use to manage the realisation and delivery of benefits. This strategy will enable alignment of all Thames Estuary 2100 projects and the overall programme with one consistent set of benefits.

When the original Thames Estuary 2100 Plan was published, the financial benefits of the strategy were assessed. However, there was limited assessment of wider benefits that could be delivered through Thames Estuary 2100. As part of the 10-Year Review this workstream established a benefits management strategy for the Plan, which will sit at the heart of future delivery. As the Thames Estuary 2100 Plan is a long-term plan, some of the benefits will not be realised until the end of the century. Therefore, it is important we have a process for monitoring and tracking, as well as reviewing the benefits throughout the Plan timeframe.

This will enable us to align future implementation to delivery of the benefits. It will also feed into our future funding strategy and enable us to seek collaborative opportunities and to deliver more in partnership.

The Benefits Strategy will enable alignment with the United Nations Sustainable Development Goals (SDGs) and will set out how we track and report our contribution to these sustainability goals and understand our wider environmental and community legacies. It will also provide an opportunity to realise and track sustainability benefits in accordance with the Sustainability Framework.

2.4.3. Planning & Policy

Under the Planning and Policy workstream, Product 7.2 has undertaken an assessment of partner plans and strategies across the estuary. By developing this product there will be a clearer understanding of how much impact these plans may have on the Thames Estuary 2100 Plan and its delivery, and the likelihood that these impacts will arise. The selection and assessment of partner plans and strategies will focus on their relevance and ability to support delivery of the Thames Estuary 2100 Plan. This work should subsequently be used to identify opportunities to align implementation of the Sustainability Framework with partners and their ambitions.

2.4.4. Riverside Strategy Workstream

Products under this workstream seek to refine implementation of the Riverside Strategy approach across the Thames Estuary, as promoted by the Plan. This approach facilitates the shaping of the future riverside by councils and communities, to deliver the required adaptation to flood defences and the environment in a planned and integrated way. Riverside Strategies seek to set holistic visions for integrating defence raising and flood protection into placemaking and growth strategies, thus avoiding the raising of flood defences without due consideration of the impacts on the environments and communities they protect.

There are several organisations within the Thames Estuary who are actively involved in the placemaking of riverside spaces in the estuary. This includes those involved directly in the creation of plans for the riverside, but also those who play a role in influencing and supporting strategic planning. To maximise opportunities to deliver the riverside strategy approach, it is essential that these organisations can act as advocates for the approach, communicating their support and implementing it where appropriate. In many cases, these organisations operate on a much larger geographical scale than individual local authorities, and so this may unlock some significant opportunities if driven as part of the Sustainability Framework.

2.4.5. Habitat Workstream

The product (Product 4.2) will be used by the Thames Estuary 2100 team, TEAM2100 (and its successor project) and Area teams to understand the preferred locations for compensatory habitat creation legally required due to projected losses of designated intertidal habitat resulting from coastal squeeze. The original Thames Estuary 2100 compensatory habitat strategy requires updating because it is based on incorrectly reported projections of how much compensatory habitat is required due to coastal squeeze. An incorrect requirement of circa 1200 ha was reported instead of the correct amount of 598 ha by 2105. It also requires updating because the first epoch of compensatory habitat has already been delivered (58 ha) and we now have a better understanding of which land may or may not be available in the future to deliver compensatory habitat in the second and third epochs.

In addition, the product will provide details of additional locations that would be suitable if the preferred locations are later found to be unsuitable or unavailable. These additional locations may also be suitable for opportunistic creation of habitat over and above that legally required for habitat compensation, for habitat compensation for other areas, for carbon offsetting or to support delivery of environment/biodiversity net gain requirements.

The product will focus on compensatory habitat for losses of designated intertidal habitat due to projected coastal squeeze, but the report will also comment on whether there would be adverse impacts on designated freshwater habitats from the proposed intertidal compensatory sites, which in turn would require freshwater habitat compensation.

The report will include a high-level timing plan for the work. This will support the teams in strategic planning of habitat creation works.

2.5. Key themes from sustainability research

Through reviewing sustainability legislation, policies, organisational commitments, and the work being undertaken as part of the 10-Year Review, several sustainability themes became apparent. Themes that were initially identified included: climate resilience and adaptation; net zero and carbon management; circular economy; biodiversity net gain (BNG) and natural capital; social outcomes and ethics; governance; and the UN SDGs. Under each of these themes, areas of focus and relevant documents were also identified from this research. They were then presented to the Sustainability Working Group to establish the appropriateness of these themes for the development of the Sustainability Framework.

The Sustainability Working Group was set up to support the development of the Sustainability Framework by acting as a sounding board for direction-setting decisions and key content. When this group reviewed the initially identified themes from the literature it consisted of several

Environment Agency (EA) staff (though later in the Sustainability Framework's development this group expanded to include representatives from the Port of London Authority (PLA) and the Royal Society for the Protection of Birds (RSPB)). Appendix D summarises the feedback from the Sustainability Working Group on the identified sustainability themes, however, key points from this feedback are presented below:

- It was suggested that the UN SDGs should be more of an overarching / umbrella theme to the other identified sustainability themes.
- Climate resilience and adaptation should go further than just focusing on flood and coastal risk management. It needs to also consider social and environmental resilience and adaptation as well.
- The Riverside Strategy Approach needed to be included within the development of the Sustainability Framework, either as a theme or within the vision and principles.
- Social equality / social outcomes needed to be stressed more within the development of the framework.
- As the Thames Estuary 2100 Plan will set out the governance for delivering a sustainable approach to flood risk management within the Thames Estuary, having a sustainability theme solely for governance was viewed as not required.

This feedback from the Sustainability Working Group was then used to refine the themes for the Sustainability Framework, and the following five core themes were established, with the UN SDGs as an overarching / guiding theme, see Figure 1:

1. Climate emergency
2. Carbon management
3. Circular economy
4. Nature emergency
5. Social outcomes

These identified themes have been the basis for developing the vision, principles, and goals of the Sustainability Framework. Additionally, the areas of focus and the relevant literature that was reviewed for each of these themes are further discussed in Section 4, as part of the development of the goals for the Sustainability Framework.

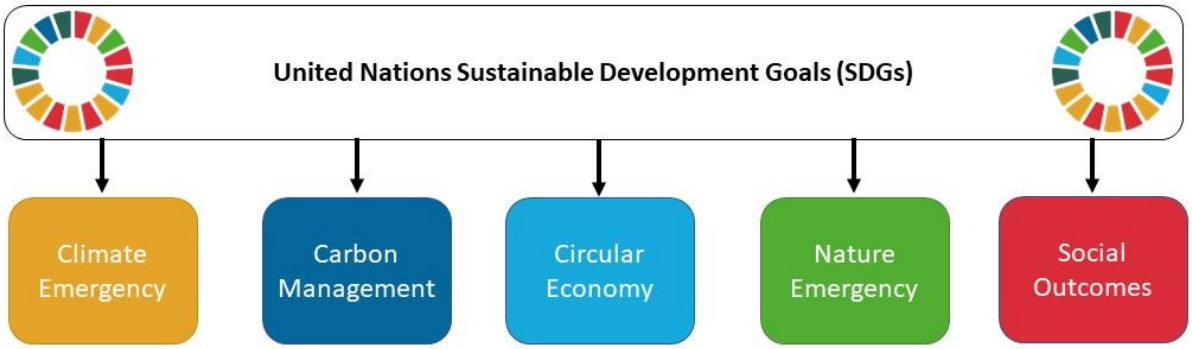

Figure 1. Identified sustainability themes

3. Sustainability Framework Vision and Principles

3.1. Introduction

The vision and principles for the Sustainability Framework will set out the ambition, priorities, and direction for delivering sustainability within the estuary over the lifetime of the Thames Estuary 2100 Plan (the Plan). This section outlines how the sustainability research helped to define sustainability within the Plan and outlines the vision and principles for the Sustainability Framework.

3.2. Defining sustainability and sustainable development within the framework

Through the review of the key sustainability legislation, policies, and other 10-Year Review workstreams, five core themes were identified: climate emergency, carbon management, circular economy, nature emergency, and social outcomes, with the UN Sustainable Development Goals (SDGs) overarching all these themes (Figure 1). These themes were embedded within the development of the vision and principles for the framework to ensure they aligned with the latest sustainability priorities. However, to establish the vision and principles for the Sustainability Framework a clear understanding of the term 'sustainability' was also required.

The current definition of sustainability in the Oxford English Dictionary is "*The property of being environmentally sustainable; the degree to which a process or enterprise is able to be maintained or continued while avoiding the long-term depletion of natural resources*". However, this term has been evolving over the years and has become more widely associated with movements linked to conservationism, social justice, and climate change, to name a few. However, the term gained global popularity in 1987 when the Brundtland Report from the United Nations outlined the hugely influential and widely used term of 'sustainable development'.

The Brundtland Commission was founded in 1983 as a sub-organisation to the UN, which focused on uniting countries in their pursuit of sustainable development. The Brundtland Commission is famously known for publishing 'Our Common Future', also known as the Brundtland Report. The Brundtland Report recognised that human resource development (in terms of reducing poverty, redistributing wealth, achieving gender equality) was fundamental to formulating strategies for the conservation of the environment. It further highlighted that economic growth in industrialised and industrialising societies limits worked in tandem with environmental limits. The Brundtland Report stated that poverty reduces sustainability and accelerates environmental pressures. Therefore, highlighting the link and the need to balance economy and ecology together. This report also went on to outline the popularized term for sustainable development as: "*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs*". Through this definition, the Commission successfully united social, economic, and environmental concerns within a single definition.

In more recent years, the formation of the UN Sustainable Development Agenda in 2015 yielded a new frontier for sustainable development and enabled social, economic, environmental, and other concerns to be addressed through a sustainable development framework of 17 UN Sustainable Development Goals that could be easily understood by a range of audiences. The UN too, adopted the overriding definition of sustainable development in the Brundtland Report, which sits above this framework. UNESCO usefully states that sustainability is often thought of as a long-term goal (i.e. a more sustainable world), whereas 'sustainable development' is concerned with the routes, processes, or pathways to achieving sustainability, such as developing infrastructure in a sustainable way or undertaking sustainable production and consumption.

Therefore, the Sustainability Framework has adopted the Brundtland definition for sustainable development, alongside the over-arching UN Sustainable Development Framework, to guide the development of the vision and principles. This is because the Plan will be developing flood defence

management assets and the surrounding riverside in a way that can be best described as ‘sustainable development’, with the long-term goal of achieving sustainability within the Thames Estuary. Sustainable development under the Plan will be delivered through the vision and principles of this Sustainability Framework, which are rooted in five core sustainability themes. These themes were identified from a robust literature review (including of the UN Sustainable Development Goals and of government and other policy) as mentioned in proceeding sections (Section 4). Therefore ‘sustainability’ within the Sustainability Framework and the Plan will be defined and delivered through the vision and principles that are outlined below.

3.3. Engagement on the Sustainability Framework’s vision and principles

The vision and principles for the sustainability framework were developed around the identified themes from the initial research. However, the vision and principles must encompass not only the elements of sustainability but also the aspirations under the Plan and of estuary partners. Therefore, the vision and principles were taken to numerous consultations with the Sustainability Working Group (set up for the purpose of supporting the development of the Sustainability Framework, as outlined in Section 2.5) and Advisory Group between July 2021 to October 2021.

The details of all engagement sessions with the Sustainability Working Group and the Advisory Group are outlined in Appendix D. However, the key points suggested from these engagement sessions were: To use more positive and assertive language and be more visionary, ensuring the framework was adaptive and thinking beyond the end of the century, and to reflect the social elements of sustainability more strongly within the vision and principles. The input from these engagement sessions were incorporated into the vision and principles and used to refine the final versions, which are outlined below.

3.4. Sustainability Framework’s vision

The Plan sets out how the estuary partners can work together to manage tidal flood risk in the Thames Estuary by the end of the century. It aims to better protect people, infrastructure, and the economy from flood risk in the long term. However, the Plan also aims to do more than just manage flood risk. This includes aspirations such as creating better access for communities to the river, creating habitats, increasing community resilience to the climate emergency, reducing carbon in all forms, and enhancing the social, economic, and commercial benefits the river provides. Therefore, when developing the vision for the Sustainability Framework broader aims over and above just flood and erosion risk needed to be considered.

The current global movement is one that paves a way towards a more sustainable future. This has resulted in a number of legal requirements and sustainability commitments at all levels to pursue this path towards sustainability, which were central to the development of the Sustainability Framework’s vision. Thus, an encompassing, but clear, sustainability vision that depicts how the future of the Thames Estuary will look is vital to ensure the longevity of the Plan’s sustainable ambitions, until the end of the century and beyond. To achieve this, it was essential that the vision and principles followed the same adaptive and iterative approach as the Plan itself. To establish a clear vision, discussions were held with the Sustainability Working Group and the Advisory Group. Key feedback from these discussions included ensuring social benefits were embedded within the thinking of the vision, that the vision needed to communicate future growth within the estuary, and that the vision used positive language to make the vision more visionary. From this feedback, the following vision for the Sustainability Framework for the Thames Estuary 2100 Plan was then agreed:

‘*Drive adaptive flood risk management in the Thames Estuary which enables access, supports business, and creates a river environment where people and nature can thrive now and into the future.*’

3.5. Sustainability Framework's principles

The sustainability principles have been developed through the consideration of the legal environmental requirements, sustainability commitments and identified themes, as mentioned previously, as well as engagement with the Sustainability Working Group and Advisory Group. Key feedback from these engagement sessions included using positive language to drive and inspire the ambitions behind the principles; and ensuring that the sustainability principles were tailored to achieving benefits through flood risk management delivery, as opposed to principles that could be applied to other types of infrastructure, whilst addressing the broader needs of the estuary.

These principles set out the foundation and direction for delivering sustainability under the Thames Estuary 2100 Plan. Embracing these principles, will guide decision-making and drive innovative solutions towards achieving a sustainable approach to flood risk management.

The Sustainability Framework principles for the Thames Estuary 2100 Plan are as follows:

1. Put the UN Sustainable Development Goals (SDGs) at the heart of decision-making and progress monitoring
2. Develop and implement a world-leading adaptive strategy for managing flood risk, that is resilient in the face of the climate emergency, to technological, policy, and societal changes
3. Take a science-based approach to achieving net zero and streamline offsetting where applicable
4. Embed circular economy approaches within flood risk management
5. Prioritise natural capital within flood risk management and unlock the potential of nature-based solutions
6. Bolster nature recovery and deliver environmental net gain across the estuary
7. Embed the Riverside Strategy approach to improve connectivity and access to the riverside for all
8. Champion innovation, collaboration, and new sustainability concepts that reduce the risk of maladaptation and promote the adaptation pathways approach
9. Take a partnership approach, facilitating collaboration opportunities, to deliver sustainability across the Thames Estuary
10. Empower local communities with a voice to shape their resilience and integrate their priorities into decision making for flood risk management
11. Advocate the importance of social value, social equity and health and wellbeing across the estuary
12. Enable accessibility to jobs and upskill the workforce as part of green growth and levelling up

4. Sustainability Framework Goals

4.1. Introduction

This section outlines the approach that was undertaken to develop the sustainability themes.

Several sustainability goals for the Thames Estuary 2100 Plan were developed, as an outcome of the Thames Estuary 2100 10-Year Review. The sustainability themes within this report (under which the goals sit) have been developed from a literature review of core sustainability policy, standards, and industry best-practices. A collaborative question-generating exercise was subsequently undertaken by the Sustainability Working Group (SWG) to mind-map the key sustainability questions that the Plan will need to answer under each theme, over the 100-Year plan period. A technical summary was developed based on each question, against a further literature evaluation, to establish key priorities and opportunities for the Thames Estuary Plan. Core sustainability goals for the Plan were established from this technical summation and further reviewed by the SWG, which output the key recommendations and outcomes for the Plan. The Plan's outcomes will undergo extensive stakeholder engagement with stakeholders and partners in 2022 prior to being adopted and this will continue throughout the Plan period to ensure appropriate views and values are captured (Figure 2). Please refer to the Reference Section for the citations used within this section and Appendix E for the collaborative mind-map exercise undertaken to establish the Sustainability Framework goals.

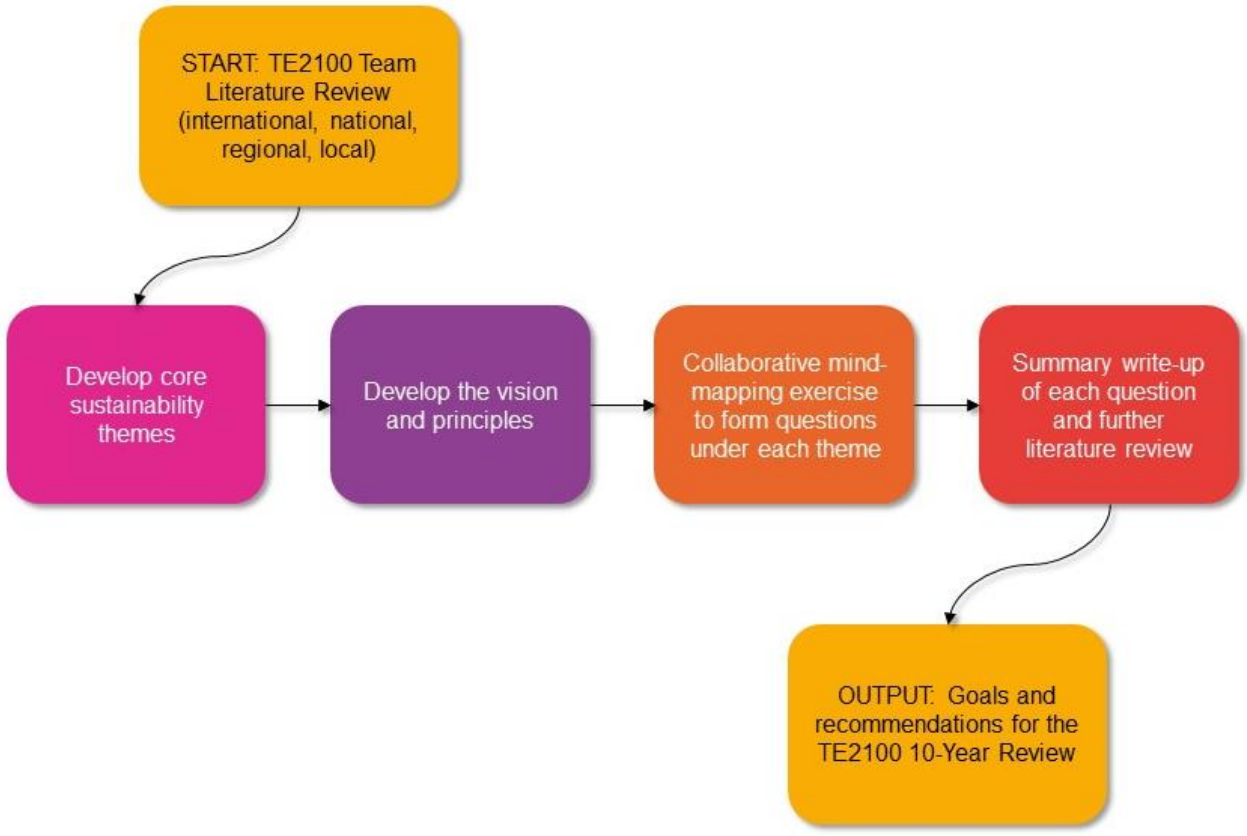

Figure 2. TEAM 2100:10-Year review process

4.2. Sustainability Framework themes

Five sustainability themes have been identified according to the above process:

1. Climate emergency
2. Carbon management
3. Circular economy
4. Nature emergency
5. Social outcomes

Though the themes have their own separate criterion they are also interdependent with one another, in the same way that the UN Sustainable Development Goals (SDGs) have overlapping ambitions. However, identifying these five core themes allows the Sustainability Framework to focus on the key areas for delivering sustainability and establishing the recommendations that will action this delivery across the estuary. The interdependencies between the themes are touched upon in the goal summaries and under the overarching goal section (where these goals are applicable to each theme).

For instance, environmental net gain (ENG) and equality, diversity, and inclusion (EDI) overlap with several of the above sustainability themes and thus are mentioned in several of the theme sections rather than separately. Whereas a natural capital approach sits across all the sustainability themes and thus is mentioned in the overarching section. It is recommended that the Plan should deliver the sustainability themes with an integrated and holistic view, whilst each theme should be given appropriate attention individually, 'double-counting' should be avoided.

4.3. Sustainability Framework themes and goals

4.3.1. Climate emergency

This section relates to addressing the climate emergency, but the section also supports the nature emergency in respect of global and UK government commitments.

Climate change includes long term shifts in weather and temperature patterns; because of natural, and human influences (i.e. greenhouse gas emissions released to the atmosphere by humans that cause a 'greenhouse effect', trapping the sun's energy and leading to warming). The level of greenhouse gases (GHG), like carbon dioxide, the longest lasting and most abundant GHG, are now the highest they have been for almost 2 million years (IPCC Report, 2021). At the '*current rate of increase in GHG, we will see a global temperature rise of at least 1.5°C to 2°C above pre-industrial levels'* (UNFCCC, 2021), which will trigger several critical thresholds in the earth's climate system (known as 'tipping points') that '*when exceeded, lead to large and often irreversible changes in that system'* (IPCC, 2021). This increases the risk of hazards, including major hazard events (known as disasters) requiring prediction, planning, mitigation, and adaptation actions by communities, to become less vulnerable to hazards and more resilient (as per the recommendations in the IPCC Sixth Assessment Report - Climate Change 2022: Impacts, Adaptation and Vulnerability).

The legally binding Paris Agreement and the United Nations 2030 Agenda (both finalised in 2015) respond to the climate crisis by setting a framework to reduce global GHG emissions by 2050, in a way that is equitable and achieves wider sustainability goals. In response, the UK Government (amongst other countries) declared a climate emergency in 2019 and set a commitment for a 100% reduction on the 1990 baseline level of GHG emissions, by the year 2050 (known as 'Net Zero by 2050') as part of the UK Climate Change Act 2008 (Amendment 2019). The UN also released the Race to Resilience Framework for non-state actors in recognition of the emergency we are already in, which has '*developed a metrics framework to support decision-making on climate resilience and indicate what success on adaptation looks like'* in the face of unavoidable current and future disaster (Climate Action, 2021).

Therefore, investment in climate resilience and adaptation measures within the Thames Estuary Plan could support our net zero targets (e.g. design to avoid carbon, use nature-based solutions,

or low-carbon materials). Likewise, funded net zero measures will need to ensure they embed the capacity for adaptation and resilience within them (e.g. can be adapted to be resilient to future heat stress, drought, flooding, or increased salinity). Ultimately, with climate change set to increase, resilience within communities, needs to be given the equivalent focus and funding as net zero. Indeed, based '*on a 1.5°C scenario, it is estimated that 3.9 billion people will be exposed to climate hazards by 2030'* requiring these communities to prepare and adapt to stay resilient (Climate Action, 2021).

However, across the Thames Estuary, different disciplines, professions, and services all have their own language when it comes to discussing resilience. Additionally, there is not currently a cohesive plan for how climate resilience or net zero will be achieved. For instance, partners within the Thames Estuary are at varying stages of the work they have undertaken on achieving resilience and net zero and have varying ambitions on how and when they will achieve this target. This creates uncertainty around ensuring value for money through not knowing when and where to invest in climate resilience measures. Therefore, there is a real need to establish how and when climate resilience measures will be delivered across the estuary by partners, what their ambitions and drivers are for achieving net zero, and to encourage dialogue on investment into climate resilience and adaptation that aligns with net zero.

Firstly, the Plan should help improve education in communities by establishing and agreeing what resilience means. Climate resilience can be taken to mean the ability to **anticipate** events and raise awareness to **prepare** for them, as well as to provide **mitigation** and **adaptation** pathways that respond to the threat of hazardous events, trends, or disturbances, which improve the ability of communities to **recover** from any residual effects. This can be viewed as a 5-point resilience model:

ANTICIPATE: The ability to anticipate events (i.e. through prediction, data, and awareness mechanisms).

PREPARE: The ability to prepare for anticipated effects and events (i.e. reduce community vulnerability, bolster defences, enact response plans).

MITIGATE: The ability to mitigate impacts as far as is possible (i.e. dampen magnitude and/or frequency of impacts).

ADAPT: The ability to adapt before, and after, to anticipated events and effects (i.e. Adaptation Pathways approach, adapting our behaviour, structures, and systems to change).

RECOVER: The ability to respond and recover from unavoidable impacts and effects.

However, the Plan should also be used as the tool to engage with partners and stakeholders to understand their resilience baseline and how they view resilience i.e. what risks and vulnerabilities they might face in a changing climate and where are they most/least prepared and able to adapt. Additionally, for the Plan to be truly effective, it should allow communities to have a say on setting their own mitigation and adaptation goals from a community-led perspective that are bespoke to their needs and cultural heritage. These shared goals can then be delivered through partnerships that are embedded in communities across the estuary. It should be noted that some local councils and businesses have already taken steps to develop resilience strategies, whilst the Greater London Authority has developed its own London Resilience Strategy (2020). Thus, the Plan should act as a learning forum to share resilience strategies in areas of commonality.

The Plan should develop an adaptive pathways approach to flood defence schemes that is informed by this engagement. An adaptation pathways approach recognises that there may be many possible adaptation solutions to responding to the climate emergency and that some actions for a solution might be undertaken now, whilst others will be undertaken in the future, as climate conditions inevitably evolve, and community vulnerabilities change. This will allow for better investment and value for money when mitigating against the impacts of climate change. The Plan should also support educating communities on the need to adapt to the climate impacts that will directly affect them and provide understanding of the wider benefits that can be taken from becoming resilient. For instance, an '*environmental net gain approach to achieving resilience to the*

impacts of climate change within [flood defence] infrastructure, has many critical benefits, including supporting natural capital by mitigating against climate change and flood risk, improving air and water quality, [providing recreational space, improving biodiversity and connectivity], and improving quality of life delivering benefits efficiently' (NIC, 2021 and FCERM Strategy, 2021). Blue-green infrastructure, sustainable urban drainage (SuDs) and absorbent urban habitats, for instance, are just one approach to enhancing urban resilience that have other multi-benefits, through the delivery of environmental net gain.

Climate change will also alter the frequency and intensity of natural hazards acting upon the flood risk management assets within the estuary (both fixed and active), inevitably changing the rate at which the different materials of these assets deteriorate. Therefore, a 'smart approach' will also benefit communities by helping them predict, become more prepared for, mitigate for, and adapt to impacts of climate change i.e. using 'resilience technology', sensors, emerging material innovations, and data monitoring (of assets, heat levels, flooding, drought, water, and air quality etc.) to inform flood defence schemes on the required adaptations. Consequently, the Plan will need to be proactive in its engagement and collaboration with partners and stakeholders to adapt to changing market innovations around these areas (e.g. assisting organisations and communities to continue to operate, such as continued water supply for boat washing, and providing heat resilience for tarmac/machinery/equipment within ports etc.)

The Plan should raise awareness on the UN Race to Resilience by 2030 campaign and UN Resilience Metrics (for non-state actions) and collaborate on a shared approach for reporting action (e.g. supporting the development of tools like The Local Climate Adaptation Tool [Exeter University], quantifying, and verifying impact under a common framework that is appropriate for use. The Plan should act as a mechanism, by which to discuss resilience funding with bodies like the Regional Flood and Coastal Committee (RFCC), the Mayor's Green New Deal (supporting better, more resilient, and greener futures), and community organisations delivering resilience. There will be a cost for adaptation measures, but the cost of inaction and inoperability will be higher e.g. hazards impacting upon business, communities, and infrastructure.

4.3.1.1. Climate emergency goals

- Facilitate engagement and collaborate with the Thames Estuary partners to drive an adaptation pathways approach that enables communities to mitigate the impacts of the climate emergency, adapt to changing conditions and recover resiliently.
- Collaborate with Thames Estuary partners and stakeholders to anticipate and prepare for the increasing demands on flood risk management assets and share bold ideas to explore innovation in technology, materials, and the latest climate science.
- Establish a net zero and environmental net gain (ENG) approach across the Thames Estuary with our partners and encourage dialogue on investment into climate resilience and adaptation that aligns with both net zero and ENG.
- Educate communities and enable a community led approach to addressing the climate emergency by putting people and place at the heart of goal setting.
- Collaborate with Thames Estuary partners to raise awareness of the UN Resilience Metrics as part of the Race to Resilience and agree a shared approach to measuring resilience.

4.3.2. Carbon management

This section relates to addressing the climate emergency, but supports the nature emergency in respect of global and UK government commitments.

Carbon net zero by 2050, is an ambition set under the UK Climate Change Act (amended 2019) under global commitments to reduce the levels of greenhouse gases (specifically CO_2) in the atmosphere by 100%, relative to 1990 levels, by 2050. Achieving this benchmark, would mean the

UK emits no more carbon dioxide to the atmosphere than it would remove. Policies such as the Government 25-Year Plan (2018), Environment Act (2021), Greenhouse Gas Protocol (2021), Science Based Target Initiative (SBTI) (2021), Woodland Carbon Code (2021), Peatland Carbon Code (2015) and the pilot for the Environmental Land Management (ELMs) Policy (full release 2024), for example, underpin and drive this critical target. The UK Saltmarsh and Soil Carbon Codes are also planned and emerging as part of an active market.

However, organisations of all sizes and sectors are tackling the management of carbon reduction to net zero in different ways. Small to Medium Enterprises (SMEs), with under 250 staff, represent '*three fifths of the employment and around half of turnover in the UK private sector*' (FSB, 2021). In keeping with this trend, SMEs include a strong representation within the Thames Estuary. The starting point of all businesses is to calculate and understand their direct and indirect carbon emissions. However, platforms like the SME Climate Hub support SMEs specifically, in their race to net zero by 2050, by helping to signpost the tools and resources needed to achieve emissions transparency for organisations of this size. Some SMEs are using this granular picture of their emissions and a desire to partake in ethical and competitive low carbon supply chains to slash pledges to net zero by as early as 2030.

Similarly, larger organisations are investing in innovation and technology to reduce carbon and are using the internationally recognised SBTI to set ambitious, market-driven targets for achieving carbon net zero between 2030 and 2050, in line with climate science. Other, certified B-Corporations have set targets for carbon net zero stretching between 2025-2050. In 2019, the Environment Agency pledged to reach net zero. This means it will ensure that its own activities and its supply chain are taking as much carbon out of the atmosphere as it is putting into it; and is cutting carbon emissions by at least 45%, before offsetting the rest (see EA2025: Creating a Better Place, 2020; The FCERM Strategy, 2021; and Environment Agency Road Map, 2021). The Environment Agency is also exploring whether it could become an 'absolute zero organisation', eliminating all carbon emissions from its own activities and its supply chain, by 2050, going beyond the Paris Climate Change Agreement (Environment Agency: Press Release, 2019).

Clearly, organisations are adopting different timescales and routes to achieving net zero, whether based on their size, sector, available time and resource, internal priorities, incentives and/or risks. This differentiation in target setting is true of businesses and organisations along the River Thames i.e., Kingston Council and Thames Water have set 2038 and 2030 pledges, respectively (at the time this report was produced). Additionally, different organisations have different accesses to carbon reduction tools and materials (e.g., digital, and non-digital platforms, or diverse accessibility needs), and can often require clarity on 'where to start', given the plethora of carbon reduction approaches. This means, to deliver a successful carbon net zero strategy, the Thames Estuary 2100 Plan will need to collaborate with partners along the Thames Estuary to achieve a better understanding of partners' key drivers, decisions, risks/opportunities, investment points and timescales for delivering their decarbonisation pathways to carbon net zero. There will be a need to encourage shared impetus for climate emergency action with our partners, with an optimistic but realistic view to determining if net zero by 2030 is feasible as a shared target.

This engagement will also inform the Plan on how far partners are embedding the industry standard IEMA greenhouse gas management hierarchy (updated 2020) into their carbon reduction strategies (See **Error! Reference source not found.**. Refer also to Motts McDonald, PAS2080: S pecification for Carbon Management in Infrastructure for a standardised approach to whole life carbon reduction in infrastructure). For instance, the percentage of carbon emissions that they are avoiding or reducing at source (foremost priority), versus the percentage of carbon they are substituting with renewables (subsequent priority) or the carbon that is being captured and offset e.g. via biological sequestration, geological storage and/or technological carbon capture (lower priority).

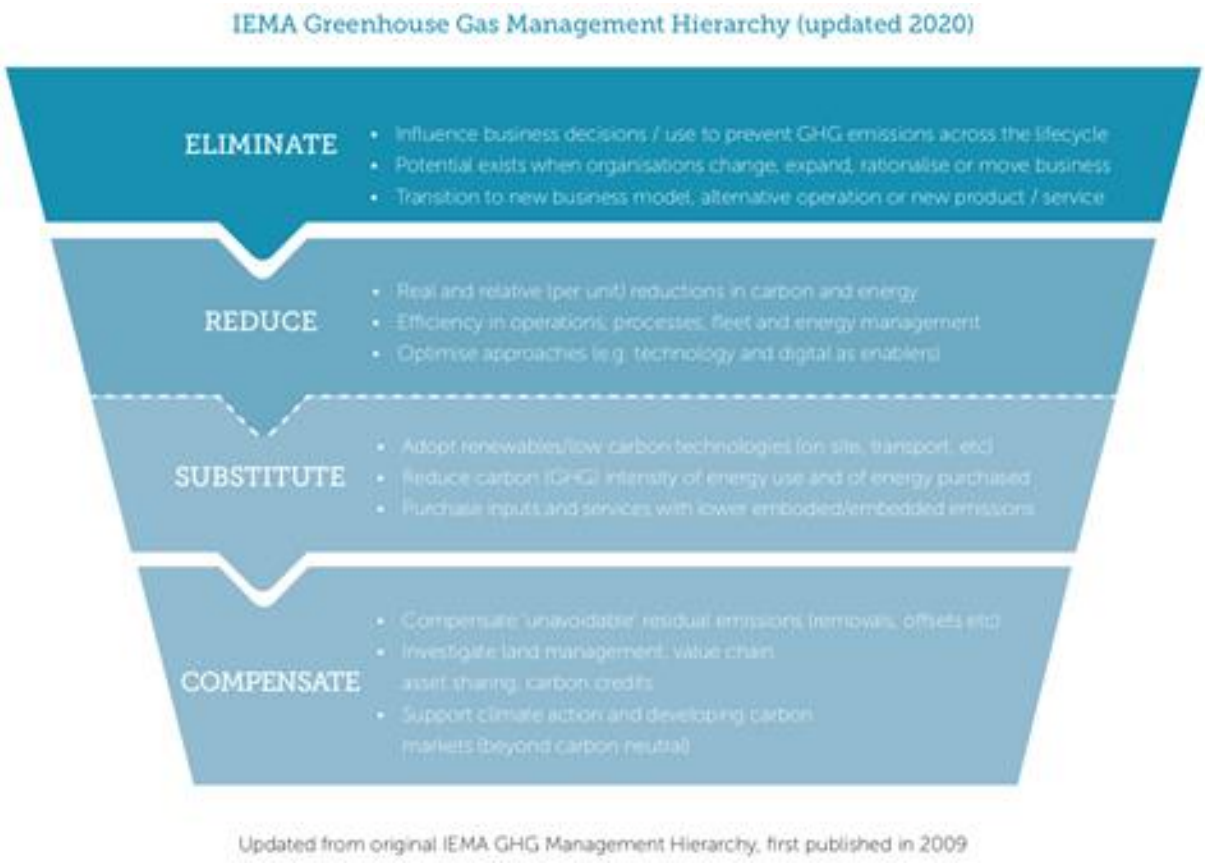

Figure 3. IEMA greenhouse gas management hierarchy, 2020

Therefore, collaborative engagement with partners should lead to a raised awareness of net zero delivery approaches within the Thames Estuary, and the key policy, tools and drivers being used to achieve targets, which will help the Plan establish a more cohesive and aligned carbon net zero approach with our partners. The Plan will also need to support monitoring and measurement of carbon emissions and enable an adaptable approach to decarbonisation that allows the Plan to respond to changes in climate, policy, innovation, technology, and addressing cumulative emissions. We would recommend that emission monitoring should also be extended to other emissions (e.g. airborne contaminants / methane) by working with partners and other Environment Agency departments, depending on the scope and remit of the Plan, given the Mayor's Green New Deal (2020) that will tackle the twin dangers of air pollution and the climate emergency (including net zero).

There will be a clear need to collaborate with Thames Estuary partners and stakeholders to proactively share best-practices in carbon avoidance, reduction, capture, storage and offsetting for upskilling communities and workforces (including our own) in the transition to a low-carbon economy. The Green Force Taskforce Report (2021) focuses on the benefits of investing in net zero to support jobs, build green career pathways that deliver net zero goals, and support workers and communities for a just transition. The Mayor's Green New Deal continues to support at least 1,000 green jobs to boost London's economic recovery and will drive new funding initiatives, as we build back a decarbonised, greener, and thriving city (build back better). Thames Tideway and the PLA have set some good low-carbon examples of implementing a decarbonised economy, whilst upskilling the workforce and creating jobs within the Thames Estuary, and therefore will be able to share some case learnings in respect of this. There are also key energy providers (for example utility companies) looking at sewage/waste to energy initiatives, community energy projects, and others looking at the hydro-economy, blue and green carbon schemes, or reuse of jetties along the Thames Estuary (Thames Estuary Growth Board / local councils) that may provide potential partnership opportunities. There will also need to be awareness amongst partners of new fuels and vessels coming onto the market in the future.

It should be noted that each of the themes in this report are interdependent. For example, a drive towards a circular economy (to design out waste and emissions production, reduce embodied

carbon and material inputs, regenerate nature, and advance renewables) will also be relevant for carbon management. See Appendix E for a more detailed explanation on how all themes within the Sustainability Framework are interconnected.

4.3.2.1. Carbon management goals

- Deliver decarbonisation pathways by establishing a unified carbon net zero approach with Thames Estuary partners, which outlines partners' key decisions, investment points and timescales and provides impetus for the climate emergency.
- Collaborate with Thames Estuary partners to agree a joined-up approach to the IEMA greenhouse gas management hierarchy for achieving carbon net zero.
- Collaborate with Thames Estuary partners and stakeholders to share best-practices and provide education for upskilling communities and the workforce in the transition to a low-carbon economy.
- Monitor and measure carbon emissions and enable an adaptation approach to decarbonisation that allows the Plan to respond to changes in climate, policy, best practise, innovation, and technology.

4.3.3. Circular economy

This section relates to addressing both the climate emergency and the nature emergency in respect of global and UK government commitments.

A circular economy is a closed 'loop' system that seeks to rebuild the 'five capitals' whether this is financial, manufactured, human, social or natural capital (Five Capitals Model, Forum for the Future, 2017), *'by ensuring the continuous flow of technical and biological materials and enhancing flows of goods and services through the value circle*' (Ellen McArthur Foundation, 2019). The system prioritises minimising new resource input through the continuous circulating of products and materials (keeping them at their 'highest value' for longer), designing-out waste and pollution production, regeneration of soils and biodiversity and is underpinned by renewable energy. For example, anaerobic digestion from animal feedstocks outputs biogas and produces biochar as a by-product that can be circled back onto crops/pasture, as one such example. The circular economy is a system that benefits people, place, and nature (see Figure 4).

As part of the London Environmental Strategy (2018) there is an objective to significantly cut waste and boost material reuse by developing a circular business programme that keeps materials within use, improves cost efficiency and provides tax relief on materials that reduce waste and increase material reuse. These principles could be applied to the wider Thames Estuary. Likewise, the transition to a circular economy has been adopted by the EU Taxonomy Regulation in 2020. Other elements are echoed in the Waste Management Plan for England (2021), Resources and Waste Strategy (2018). Circular Economy Package (CEP), and Environment Agency Waste Management Plans.

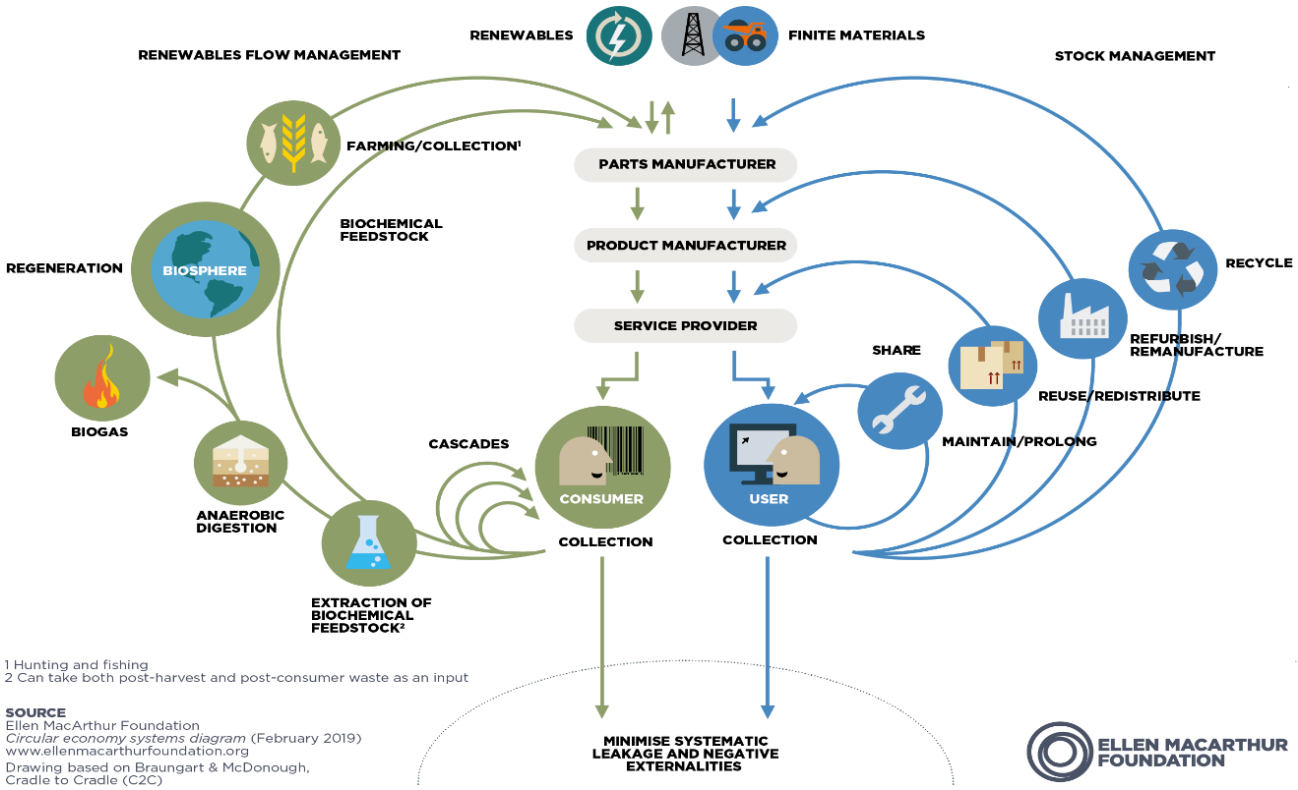

Figure 4. Ellen MacArthur Foundation: Circular economy butterfly diagram

Adopting circular economy principles within the Thames Estuary 2100 Plan will help create a more sustainable flow of resource and materials across asset management and flood defence infrastructure schemes under the Plan and boost the health of all Five Capitals, though especially Natural Capital (e.g. energy, biodiversity, waste and cost efficiencies, whilst developing financial opportunities in the form of new green markets and cohesive social networks that are implementing circular economy principles within society). Increasingly, 'waste' is increasingly being reframed as 'gold' - where one person or organisation deems an end-of-purpose resource 'waste', another may be able to extract the maximum value from that resource, or regenerate that resource, and deem it 'gold'. These principles could be applied directly to flood management assets in the Thames Estuary in the following ways (though these are not exhaustive):

- Use less resource e.g. tolerances, strategic design, integrate nature-based solutions.
- Sustainable sourcing and procurement e.g. from verified cradle-to-cradle (C2C) sources and sustainable suppliers, and monitor changes to verifications.
- Design-out waste from flood defence infrastructure – e.g. through strategic design, longer life, and low-carbon circular materials.
- Material reuse and recovery e.g. create a 'network' of local estuary partners on an open-data platform, to allow for efficient and effective sharing of materials between projects - map out where materials are viewed as waste but could be reused (such as the beneficial use of dredged sediment (BUDS) at Wallasea Island where Crossrail donated 98% of its project's clean / suitable waste material to create a wetland habitat at Wallasea (PLA, 2022)).
- Use technology to align freight and construction programmes to create efficiencies in logistics that allow for clear reuse pathways between projects within the estuary.
- Share and/or rent equipment, machinery and purchases between sites, schemes and with partners (where feasible).
- Ensuring damaged products/asset components are repaired and maintained in the first instance.

- Recycling e.g. in offices, on site, and between schemes.
- Remanufacture of assets or using remanufacturing suppliers (e.g. dismantling the product, restoring, and replacing components).
- Repurposing to adapt product for use in different purpose (e.g. investigate where flood defences could be repurposed at end-of-life or designed to be repurposed).
- Regenerate nature and soils through regenerative agriculture and biodiversity initiatives, which also help to retain water during drought conditions.
- Renewable energy could be used to power flood management assets such as the Thames Barrier, pumping stations, site machinery, or the new barrier proposed for later this century.

Potential complexities around the implementation of a circular economy can involve uncertainties around:

- Material health (durability, toxicity, tolerances, quality, passports etc.) and the specifications of reused materials that were originally designed for another purpose.
- Designing with, and costing reused materials.
- Planning around sourcing, storage, licencing, and logistical programming issues.
- How to design for reusing components of flood defence assets, or re-purposing flood management assets at end-of-life.
- How to make space for introducing renewable energy and regeneration initiatives (i.e. for agriculture and biodiversity) to the Thames Estuary.
- How to source energy and approach land and riparian owners for regeneration schemes.

Engagement with partners, stakeholders, communities, and workforces will be critical to effectively source, procure, store, supply, share, plan out, regenerate, and realise shared benefits from circular economy resources. There will also be a need to encourage the monitoring and recording of material health and performance and to share these results. This will enable the Plan to be adaptable to the latest developments, including regulatory, verification and assurance processes.

Therefore, the Plan should be used as the tool for establishing a ‘communication network’ between diverse estuary-wide partners to raise awareness of key circular economy issues and encourage proactive planning, mapping, and sharing e.g. share examples of certified cradle-to-cradle materials, circular economy implementation, innovative case studies or emerging verification and assurance-related policies and standards.

Engagement with these groups should also drive discussion on advances in technology and data, which will be key to a paradigm shift towards a circular economy, i.e. to help lower costs, automate tasks, create, and improve connections, exchange information, and take a ‘smart approach’ to making products, processes, and services more circular. The Plan will need to be flexible to build in advances in data, innovation, technology, and reporting.

The Thames Estuary is a hotspot for future economic growth due to its proximity to London, international trade routes via its ports, educational establishments such as universities and research institutions and available workforce. The Thames Estuary 2050 Growth Commission Vision (2018) predicts that the estuary will support 1.3 million new jobs by 2050. Existing sectors of freight, logistics and construction will be strengthened and existing assets, such as ports, will be maximised. The vision aims to improve connectivity between and within urban settlements to support productivity via better access to jobs, services, and supply chains. Aligning this economic growth with circular economy principles will enable economic efficiencies within the estuary. This would see economic growth decoupled from its dependence on raw materials, thus no longer hampered by shortages of raw materials and would enable maximum value from resources already within the estuary. The Mayor’s Green New Deal (2020) also supports over 1,000 green jobs (including those routed in a circular economy). However, alignment to circular economy principles would need to be supported by efficient and reliable supply chains within the estuary for sustainable growth to be achieved.

Therefore, there is a real opportunity for the Plan to lead the infrastructure market in driving collaborations with partners to identify raw material needs in the estuary, enable the transition to alternative resources; and create an improved supply chain network, which would enable economic growth to be grounded in circular economy principles. This green growth will also help to regenerate social conditions and create new social relationships and partnerships between organisations and communities within the Thames Estuary. Similarly, investment in regeneration (i.e. of soils, agriculture, biodiversity etc.) and renewable energy will help unlock investment opportunities with partners focused on natural capital (including air and water quality), biodiversity and environmental net gain, waste to energy and other energy models, and will help support community based economies. Ultimately, circular economy strategies can cut global greenhouse gas emissions by 40% and play a crucial role in avoiding climate breakdown as demonstrated by Amsterdam (Circularity Gap Report, 2021).

4.3.3.1. Circular economy goals

- Drive circular economy principles within the Thames Estuary to minimise resource input, regenerate natural systems and reduce waste and emissions production. Work with our partners to agree responsibilities for driving measurable improvements to abundant circularity that will regenerate business, people, nature, and soils.
- Drive healthy circular supply chains within the Thames Estuary so that circular economy principles are embedded at every level of an organisations' decision-making, are inclusive, and conform to a robust set of sustainable socio-environmental targets within planetary boundaries.
- Unlock and maximise partnership opportunities around the logistical issues of sourcing, procuring, storing, sharing, planning out, and supplying materials to enable a circular economy approach.
- Establish partner's aspirations and imperatives for renewable energy and act to embed improvements around all energy consumption for flood risk management within the estuary.
- Create space for and identify the applicability of different renewable energy types within different areas of the estuary, by working with partners and communities.
- Establish and agree a proactive, open-source data network to share best practise, monitor and report on progress and outcomes, record feedback and maximise partnership and stakeholder opportunities for healthy (non-toxic) circular systems including sourcing / design / deconstruction at enterprise and supply chain level.
- Drive an innovative and adaptable approach to designing flood risk management solutions so that material components include safety and circularity as mutually inclusive but allow flexibility for advances in socio-environmental standards, policy, sourcing, materials, engineering and technology, design, innovation, and systems.

4.3.4. Nature emergency

This section relates to addressing the nature emergency, but supports the climate emergency in respect of global and UK government commitments.

In response to the nature emergency declared by UK Parliament (and globally), nature recovery goals have been set at the local, regional, national, and international policy levels.

The 17 UN Sustainable Development Goals (UN SDGs) are interdependent and include objectives to protect and improve 'life on land' (Goal 15) and 'life below water' (Goal 14), as well as to support 'climate action' through the regeneration of carbon 'sinks' and 'stores' (following carbon reduction measures at source). The goals also set ambitions to bolster 'health and wellbeing' and 'reduce

inequalities' by providing more equal access to green and blue space and associated nature recovery opportunities (e.g. conservation volunteering). The last UN's Convention on Biological Diversity (COP15) saw international agreement and countries signing up to protecting at least 30% of the world's land, ocean, coastal areas and inland waters by 2030, which was achieved through international agreement and discussing pathways for nature recovery. Investment pathways are increasingly supporting further nature recovery initiatives through regulatory frameworks like the global Taskforce for Nature Finance Disclosure (TNFD) (refined 2022, will be fully launched 2023), which enables companies and financial institutions worldwide to integrate nature measurably into decision-making (V0.3 of the TNFD beta framework is out for consultation).In support, the UK Government 25-Year Plan seeks to '*support nature's recovery....and restore losses suffered over at least the past 50 years*'. The national Nature Recovery Network (NRN) is a major commitment in the Government's 25-Year Plan and forms a diverse group of regional stakeholders seeking to address the UK's nature recovery movement by connecting and improving wildlife sites, reintroducing native species, halting the alarming loss of biodiversity, providing species conservation, and exploring conservation covenants, which fed into several pre-COP15 discussions.

To put biodiversity on a path to recovery for the benefit of the planet, nature and people, several national policies have been developed to address the crisis. Namely, the Environment Act (2021), DEFRAs Enabling a Natural Capital Approach (ENCA, 2021), DEFRAs Nature Recovery Green Paper (2022), The FCERM Strategy (2021) and The Environment Land Management (ELMs) Strategy (test and trial 2021, full release 2024). These introduce several core practical nature recovery targets and 'measures' to be implemented by the Plan, some of which are discussed in Table 1.

Local Nature Recovery Strategies (LNRs) driven by Local Authorities (and Natural England), local Wildlife Trust Initiatives (e.g. protect and recover at least 30% of land and sea by 2030), Local Authority Climate Resilience Strategies and Riverside strategies, like the Thames Estuary 2100 Riverside Approach and City of London Riverside Strategy (2021) help support nature recovery actions at the local, place-based level on the ground (as per Table 1).

The Plan will need to be flexible to take account of policy developments, the outcomes from COP15, and changes to these targets and measures over 100-Years (such as the impending UK Saltmarsh Carbon Code and UK Farm Soil Carbon Code (UKFSCC).

Table 1. Core nature recovery measures

Key nature recovery measures		
Nature recovery measure	**Supporting governance**	**Description**
Enabling a Natural Capital Approach (ENCA) **Natural Capital Accounting Tools**	• Enabling a Natural Capital Approach (ENCA) & The Services and Assets Data Book Sets (2021) • Natural England Natural Capital Atlas: NECR285 • FCERM Strategy 2021 • The Government Environment 25-Year Plan (2018) • Riverside Strategy 2021 • National Infrastructure Committee (2021)	• Natural capital comprises earth's natural assets (soil, air, water, flora, and fauna), and the ecosystem services resulting from them, which make human life possible (UNEP Finance Initiative). • Natural Capital Accounting is a quantitative method for valuing the '*elements of nature that either directly or indirectly provide value to people*' including the flow of ecosystem services between them (UK Natural Capital Committee, 2021). • These can be material benefits (known as provisioning services. food, pollination, raw material etc.), regulatory services (e.g. air, soil, water, and climate regulating systems), supporting services (e.g. nutrient cycle, habitat provision, soil formation etc.), or non-material (known as cultural services, such as cultural, recreational, or aesthetic).

Key nature recovery measures		
Nature recovery measure	**Supporting governance**	**Description**
Environmental Net Gain (ENG)	• FCERM Strategy 2021 • EA2025: Creating a better place (2020) • The Government Environment 25-Year Plan (2018) • The EA eMission2030 • National Infrastructure Commission (2021) • National Planning Policy Framework (NPPF) • Natural England Green Infrastructure Network. • Green Blue Thames Estuary Board Growth Action Plan (2020). • All London Green Grid Framework (ALGG) • London Environment Strategy (2018)	• Environmental Net Gain (ENG) aims to '*leave the environment in a measurably better state compared to the pre-development baseline'* (NIC, 2021). ENG goes beyond Biodiversity Net Gain, which is a prerequisite of it (for all planning development, but only refers to habitats), to deliver wider environmental benefits. • ENG supports the natural capital approach by '*mitigating against climate change and flood risk, improving air and water quality, [green and recreational space] and improving quality of [other] life delivering benefits efficiently, for example both achieving an infrastructure goal and increasing resilience*' (NIC, 2021). It also seeks to '*create a sense of place'* and improve community functionality within the setting. • ENG is referenced in the NPPF and can save time and money by avoiding planning appeals due to environment and social objections. • The Blue-Green Infrastructure Frameworks work alongside landscape, soil, nature, and cultural, heritage regeneration/rewilding projects to bolster ENG initiatives.
Natural Flood Management (NFM) / Nature Based Solutions (NBS)	• DEFRA Adaptation Plan (2018 - 2023) • FCERM Strategy 2021 • The Government Environment 25-Year Plan (2018) • FCERM (2021): Working with natural processes to reduce flood risk • US Army Corps: Engineering with Nature: Atlas II • The Thames 2100 Riverside Approach / The CoL Riverside Strategy, 2021 • The National Planning Policy Framework (NPPF), 2019	• Natural flood management (NFM) is the activity of using natural processes to reduce the risk of flooding and coastal erosion. For example, use of leaky dams, tree planting (through the Forestry Commission or Woodland Trust schemes), restoring bends in rivers, using bunds, changing the way land is managed so soil can absorb and retain more water (e.g. Sustainable Urban Drainage System [SuDS]), and creating saltmarshes or restoring seagrass to absorb wave energy etc. • Nature-based solutions (which include NFM) techniques) protect, sustainably manage, and restore ecosystems, which helps to address some of the challenges facing humanity (e.g. climate change, food, and water security of natural hazards). At the same time nature-based solutions can provide wider benefits to human well-being (access to blue/green space), resilience and biodiversity. • NFM and NBS avoid hard engineering that can increase carbon and lead to coastal squeeze, encroachment, and other geomorphic effects. • Riverside Strategies can introduce NFM and NBS solutions that are appropriate for each area.
Environmental Land Management Strategy (ELMs) **Sustainable Farming Incentive (SFI)** **Agroforestry / Rewilding**	• DEFRA Environmental Land Management Strategy (ELMs) Test and Trial (full release, 2024-25) forming: • DEFRA Sustainable Farming Incentive (SFI) (2022-2025) • Landscape Recovery (LR) roll out (2022-2025) • Local Nature Recovery (LNR) (2023-2024) • The UK Farm Soil Carbon Code (UKFSCC) • The Agriculture Act 2020	• The Agriculture Act 2020 supports farm workers, fairer trade and models that bolster sustainability concepts such as agroecology, organics, biodiversity, and ELMs. • ELMs provide a framework for the regeneration of our soils and biodiversity, within the context of sustainable farming. The Sustainable Farming Incentive (SFI) incentivises agricultural stakeholders to make this move. • The UK Farm Soil Carbon Code (UKFSCC) will consist of a set of formal protocols that allow farmers to quantify and verify reduced greenhouse gas emissions and/or soil carbon capture because of adopting regenerative farming practices. • ELMs, currently includes a reference to 'rewilding' and they are also working to support access and heritage through all 3 schemes. • More policy on rewilding / soil and biodiversity regeneration and resilience / agroforestry / urban-gardening / urban-forests is likely to emerge over the next 100 Years.

Key nature recovery measures		
Nature recovery measure	**Supporting governance**	**Description**
Biodiversity Net Gain (BNG) **Biodiversity Mitigation Hierarchy**	• The Environment Act (2021) • Natural England Biodiversity Metric 3.1 - JP039 • Natural England: The Small Sites Metric (JP040) • National Planning Policy Framework (NPPF) • The Biodiversity Net Gain: Good Practise Principles for Development (2019) • DEFRA Biodiversity Mitigation Hierarchy • COP15 (2022)	• The Environment Act 2021 mandates 10% biodiversity net gain (BNG) is to be achieved as a condition of planning permission for developers, via the National Planning Policy Framework (NPPF) • eMission, the Environment Agency sustainability tool, advocates an aim for 20% biodiversity net gain (BNG) where feasible. • BNG applies to both terrestrial and intertidal zone habitats, but not below the low water mark at present. • However DEFRA is currently developing a regime for marine BNG within England. This focuses on the sub-tidal environment but allows for revisiting the interactions between intertidal and sub-tidal habitats. Consultation on this ended in September 2022, and a summary of consultation responses is yet to be released. • The Biodiversity Net Gain Good Practise Principles must be followed (i.e. BNG does not apply to 'designated habitat', which must be compensated, and offsetting must start at the site of impact, working outwards only where onsite constraints exist). • Biodiversity net gain still relies on the application of the mitigation hierarchy to avoid, minimise, remediate, or compensate for biodiversity losses first. It is additional to these approaches, not instead of them. • There are strategic local Environment Agency seagrass restoration and oyster initiatives underway and existing partnership work on terrestrial pollinator schemes/studies that look at bee use on seawalls, all of which could contribute to BNG.
Carbon Offsetting - Carbon Net Zero (including Blue Carbon)	• UNFCCC Race to Net Zero • UNFCCC Race to Resilience • EA2025 Plan: Creating a Better Place (2020) • Greenhouse Gas Protocol • Science Based Target Initiative (SBTI) • Woodland Carbon Code • Peatland Carbon Code • Mott McDonald PAS 2080: Carbon Management in Infrastructure • IEMA Greenhouse Gas Management Hierarchy (updated 2020)	• The 'Race to *[Net]* Zero' and 'Race to Resilience' are UN campaigns designed to reduce emissions and bolster resilience. The SBTI and GHG Protocol are certified tools that help set science-based targets to reach carbon net zero before 2050. • The IEMA greenhouse gas management hierarchy gives importance to eliminating, reducing, and substituting emissions, before offsetting them in the first instance. • PAS 2080: Carbon Management in Infrastructure is the global standard for carbon management within infrastructure and provides a framework for managing whole life carbon, in line with IEMA's greenhouse gas management hierarchy. • The Environment Agency EA2025 Plan includes a mission to reduce emissions by at least 45% by 2030 and to offset the remainder – but is looking into whether it can become absolute net zero by 2050. • The verified Woodland Carbon Code, Peatland Carbon Code, and impending UK Farm Soil Carbon Code allow for longer term offsetting and the use of 'carbon credits', but local initiatives also exist. There are several emerging blue carbon schemes, and the UK Saltmarsh Carbon Code is currently being piloted. Seagrass, is a proficient carbon absorber and is also being looked at strategically in Environment Agency schemes.
Local Nature Recovery Strategies (LNRSs) **Riverside Strategies** **Invasive Non-Native Species (INNs) / The Invasive Alien Species**	• The Environment Act 2021 • The Thames 2100 Riverside Approach / The CoL Riverside Strategy, 2021	• Local Nature Recovery Strategies (LNRSs) are mandated through the Environment Act 2021 and developed by the local responsible authority (i.e. local councils) to determine local biodiversity priorities for nature recovery within the strategy area. These can include a mix of the above initiatives, or entirely different, suitable schemes. There is potential for live, local opportunity registers to sit alongside LNRs as options emerge which can be consulted on. • Local (and all) nature recovery schemes will need to achieve compliance with INNS legislation like The Invasive Alien Species (Enforcement and Permitting) Order 2019

Key nature recovery measures		
Nature recovery measure	**Supporting governance**	**Description**
		and must be adaptable to increasing climate and biosecurity hazards. • Local Riverside Strategies also set out NFM / natural capital / other nature recovery measures for their own local areas. • There are key potential links between local initiatives and important funds e.g. The Local Heritage Fund – providing a boost for nature, communities, and culture (backed by the National Lottery), the Natural Environment Readiness Fund, and the Mayor's Green New Deal and All London Green Grid (ALGG), amongst others. Equally there are links between key partner projects e.g. possibly South Essex Estuary (SEE) Park, the Essex Seagrass Project, The Thames Landscape Strategy, PLA Vision 2050 etc.

Firstly, the new Plan will need to embed a strong natural capital approach (NCA) methodology within flood defence infrastructure, throughout the whole value chain, from early strategic considerations, to inform optioneering and beyond. The Plan should be used as the leading mechanism for championing the NCA approach and driving it throughout the estuary to reduce impacts to natural asset stocks and enhance the natural capital benefits arising from the ecosystem services they provide. This enables the Plan to create thriving places for people, business, and nature. It will be essential to collaborate with stakeholders, partners, and local community groups to share education on the importance and benefits of a natural capital approach and to provide the Plan with shared feedback with respect to natural capital. The Plan must also seek to understand what the needs are for enhancing place-based natural capital across the whole of the Thames Estuary; and what opportunities there are for collaboration with partners and stakeholders, between schemes. Natural capital can then be viewed as leading an integrated way of working, which is critical to achieving cleaner and sustainable air, water, and land natural asset stocks. As part of the Thames Estuary 2100: 10-Year Review a 'Natural Capital Framework' has been developed. The framework recommends undertaking a baseline natural capital account of the tidal Thames, including a qualitative assessment of all ecosystem service values delivered and the quantification and monetisation of such values where possible. Natural capital accounts for each of the Thames Estuary 2100 Plan options, which assess the impacts on the natural capital assets present and the consequences for the value of the ecosystem services delivered. The Natural Capital Framework makes recommendations for areas of improvement to the existing Environment Agency's Natural Capital Register and Account Tool (NCRAT). There is a need to be efficient with data and evidence collection, including reuse of current information and assessments, being clear what additional evidence is required, and minimising duplication of effort when undertaking different environmental assessments and outcomes across areas and projects. A monitoring programme should be undertaken due to the infancy of natural capital and would enable us to incorporate views and values that may extend the tool's coverage and accuracy further and ensure stakeholder and partner needs are met for their areas.

There will also be a need for the Plan to tie in with other local, regional, and national habitat creation schemes as part of this exercise. This may enable shared objectives to be realised between neighbouring schemes, for example, by tying in with Natural England's habitat creation audit (UK-wide spatial mapping), ELMs test and trial schemes, Local Authority blue-green infrastructure plans, local Landscape Visions, local Riverside Strategies and Local Nature Recovery Strategies (LNRSs), among others. For instance, the goal of some local areas of habitat creation / enhancement / restoration may be for it to remain undisturbed to the public, and in other areas, the opposite may be true.

Environmental net gain (ENG) supports the natural capital approach but seeks to '*understand local context and the relationship between communities and the natural environment in a given area'* in a bid to leave the wider environment in a *'better state, than the pre-development baseline'* (EIC,

Natural Capital Taskforce, 2021). Whilst biodiversity net gain (BNG) is typically a prerequisite for ENG, BNG is a narrower measurement that refers only to habitats. ENG goes further to provide wider benefits to the environment i.e. tackles air quality, water quality, nature recovery, recreational, landscape and cultural heritage needs and quality of life deriving benefits that bolster a sense of place and aid community resilience (dewatering/drought/flooding/heat/ nutrient levels etc.). One example of this would be through implementing ambitious blue-green infrastructure or biodiversity creation and/or resilience initiatives. These initiatives help to soften estuary edges, provide sustainable urban drainage systems (SuDS), green-blue corridors and deliver multiple benefits for communities (landward and intertidal) i.e. the green corridors of Tivoli, Rome stretching [from the river, into the city], as proposed for the square mile in London. ENG should be championed throughout the estuary to raise awareness with partners, stakeholders and community groups on its benefits and its increasing inclusion in the National Planning Policy Framework (NPPF) in respect of seeking to achieve 'net gains' for 'social and environmental objectives', so that these groups can remain future facing. The Plan should collaborate with Thames Estuary partners to develop a united approach to achieving ENG, collaborate on opportunities, reach agreement on how this will be monitored and measured and of course, ascertain ownership responsibilities.

The Plan should unlock innovative natural flood management (NFM) techniques and wider Nature-based Solutions (NBS) to reduce the risk of hazards, provide wider natural capital and resilience benefits and drive these throughout the estuary, where appropriate. The NFM approach eases the pressure of coastal squeeze from a hard line of engineering and allows for coastal habitats to transgress landwards. Such approaches can also provide resilience to several different hazards (e.g. act as wave buffers, provide relief from storm surges, provide heat and nutrient resilience, bolster drought relief and avoid dewatering, improve sustainable urban drainage, catchment flooding solutions etc). NFM and NBS techniques help improve community resilience to the impacts of the climate emergency, reduce carbon and deliver wider catchment benefits to natural capital, upon which the other four capitals rely (e.g. social capital, human capital, financial capital, manufactured capital). However, practical considerations such as where best to undertake NFM/NBS, protecting landscapes and historical environments, land ownership considerations, spatial considerations, consideration of flood modelling/standard of protection data, environmental/ecological impact assessment and community/stakeholder views and values for example, will all need to factor into its implementation. Therefore, the Plan could help align with the Riverside Strategy by driving collaboration with partners to map out and agree the appropriate locations within the estuary to implement an NFM/NBS approach, support the establishment of integrated working, develop a monitoring programme to determine performance, and share valuable best practice.

There is a legal requirement to embed 10% biodiversity net gain (BNG) in any development proposals that require approval through the planning permission process. BNG seeks to '*minimise impacts on, and provide net gains for, biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'* (NPPF). Biodiversity net gain still relies on the application of the DEFRA biodiversity mitigation hierarchy to avoid, reduce, minimise (mitigate), or compensate for any biodiversity losses, in that order (and especially for any designated habitat which cannot be 'offset' through biodiversity net gain currently, because it is deemed irreplaceable). BNG is additional to these approaches, not instead of them. BNG therefore applies to non-designated habitat, which can be 'offset' where impacts are deemed otherwise unavoidable. The Plan should raise awareness of the DEFRA biodiversity mitigation hierarchy for partners and stakeholders who may not be fully familiar with it (and the principles of avoidance of impacts, over offsets first). The plan may also be used to align and optimise strategies for BNG initiatives local to impacts, where feasible (following the BNG best practise principles for offsetting).

Similarly, with the rise of biodiversity credits (mandatory and voluntary) and the woodland and carbon peatland schemes in existence (with other codes impending, see table 1), there may be chances to align marketable carbon offsetting measures between partners and stakeholders as part of collaborative engagement and to draw up an approach to this. However, it currently takes time to realise carbon offsets from blue-green nature recovery initiatives, which should be considered, alongside whether it is preferential to bring in communities to meaningful local nature recovery project initiatives happening now, on the ground (using shared funding). The IEMA

greenhouse gas management hierarchy for achieving carbon net zero must be included in any approach to blue and green carbon offsetting schemes.

The plan will need to remain adaptable to changes from climate change, policy, and monitoring programmes throughout the UN decade for ecosystem restoration (2021-2030) and beyond, for the 100-Year plan period. For instance, forms of nature recovery may require to be tailored to rising sea levels and a changing estuarine environment (such as changes in climate, habitat, and soils) rather than 'only' protecting what we have, exactly as it is in its current state (where this is not a possible or best outcome, as determined by working with important partners such as Natural England, RSPB, and the local Wildlife Trusts). This might mean appraisal of species / timescales / interventions / resilience funding opportunities suited both to the present day and future situation (e.g. adoption of tolerant, complimentary, and adaptable habitats / species at set locations).

4.3.4.1. Nature emergency goals

- Drive a natural capital approach within the Plan in response to the nature emergency, ensure adaptability and educate stakeholders, partners, and communities on the importance and benefits of natural capital.
- Educate partners and stakeholders within the Thames Estuary on the requirement for biodiversity net gain (BNG) and collaborate on appropriate opportunities for minimising impacts on and providing net gains for, biodiversity that enable coherent ecological networks, and ensuring the Plan is flexible to future developments in these fields.
- Establish with Thames Estuary partners a joined-up environmental net gain (ENG) approach to Nature Recovery that investigates the ENG priorities for the estuary, outlines how we will achieve them, sets how ENG will be monitored and measured, protected, and provides ownership of responsibilities. This will help establish more coherent ecological networks that are more resilient and adaptable to current and future pressures, and provide the best ecological outcomes.
- Collaborate with landowners and partners to implement a Nature-based Solution (NBS), including natural flood management (NFM), approach within the estuary that is suitable for addressing both landowner and flood catchment area needs, which could also add biodiversity value.
- Collaborate with Thames Estuary partners to agree an approach to adopt and embed the four goals and 23 targets for 2030 from the landmark UN Biodiversity Agreement at COP15.

4.3.5. Social outcomes

This section relates to addressing both the climate emergency and the nature emergency in respect of global and UK government commitments.

4.3.5.1. Overview

Flood defence infrastructure delivers essential services for society to function, such as protection from flooding and erosion. However, by focusing on broader social outcomes, we can create additional 'social value' through delivery of the Thames Estuary 2100 Plan. The additional social value encompasses two key parts:

1. Firstly, we can seek to address the systemic inequalities in society to contribute to achieving 'social equity'. Social equity is different to equality, which is concerned with treating everyone equally. Instead, social equity seeks to recognise the differences in need within society and therefore to reduce the underlying systemic differences in access to opportunity and resources these people may have (see Figure 5). Social equity aims to create an impartial, fair, and just 'system' for all people. Flood defence infrastructure schemes can be critical for helping design for the estuary to be more equally, diversely, and

inclusively used by all, through conscious design of infrastructure (social architecture) that aims to address these systemic differences and embed place-based needs for the estuary.

2. Secondly, the aims of the Plan are wider than flood and erosion risk management. They seek to provide wider social benefits, and these have been defined further through the strategic benefits mapping completed with partners and our Advisory Group in 2021. These benefits include providing better access to the river, more recreation space (blue and green), improving health and wellbeing, and improving community resilience. Community resilience can be considered to include aspects of green infrastructure, culture and cohesion, technology, nature-based solutions, or delivering environmental net gain, for example.

4.3.5.2. Context

4.3.5.2.1. Place-based engagement

Several factors shape residents' feelings about the identity and value of a place. To deliver truly effective social outcomes through the Plan there will be a need to understand the full scope of social outcome drivers and priorities within the different areas along the Thames Estuary. To achieve this, we need to engage with diverse partners, stakeholders, and communities from the inner to the outer estuary, as part of the Plan, to understand their perspectives on social needs. This will enable us to embed place-based needs into, and around, flood defence developments (e.g. through the optioneering, design and benefit realisation phases) that seek to level-up the estuary. It is important we embed perspectives that are rooted in society, at a more granular level, so that communities are given a voice in making their own decisions on addressing social problems, and adding social value, within their own community. This will deliver value for taxpayers' money as the community will be the users of the riverside environment and therefore will want to be part of shaping their own sense of place, whilst protecting the distinctive character of their area, and ensuring results are usable, appropriate and continue to add quality of life to their community and river users. The National Planning Policy Framework (NPPF) also emphasises the need to embed environmental and social objectives, including opportunities for 'net gains', into planning submissions, of which communities will be central consultees. Therefore, time and cost can be saved by enabling a 'participatory design' approach to achieving social value, which involves engaging diverse stakeholders, partners, and end users in the early stages of design, to ensure the results are appropriate and usable.

4.3.5.2.2. Equality and inclusivity

Existing inequalities already exist with respect to deprivation, health and wellbeing, access to opportunity, education, and resource in areas of inner London, when compared to areas of the outer estuary as demonstrated by The Thames Estuary Levelling Up Data Atlas (Thames Estuary Growth Board, 2020) and Office for National Statistics (ONS). There is also a need to ensure robust data collection and assessment across both the inner and outer estuary, paying more attention to the areas where data is less well defined. Therefore, the Plan should be used as an engagement tool to level-up the estuary by bringing together fragmented and diverse Thames Estuary partners, stakeholders, social enterprises, organisations and community groups from across the estuary so that the parties involved in delivering the Plan can work together to map out their social value drivers, social equity baseline, share best-practice case studies, pool information on demographics, geography and other data; and use this information to agree a shared implementation and funding approach to delivering social value and equity across the Thames Estuary 2100 programme. Additionally, the Thames Estuary Growth Board (2021) points to opportunities for levelling-up access to opportunities (including jobs and resources) within the Thames Estuary, as does the Major's Green New Deal (2020), whilst Public Health England emphasise that 'the most economically deprived areas have less available good quality public green [and blue] space'. The Riverside Strategy Approach provides a basis for continuing these discussions with communities to understand how inclusive and equal, place-based social needs

specific to their own areas can be built into a riverside strategy, providing a vision for how flood defence upgrades can be integrated into future riversides. Table 2 gives further examples that might be considered in those discussions.

4.3.5.2.3. Designing for protected characteristics

The Equality Act 2010 defines nine protected characteristics that need to be considered when delivering social value as part of flood defence infrastructure developed through the Plan. Within the Thames Estuary specifically, there are aspirations for *'a fairer, more equal, integrated city where all people feel welcome and are able to fulfil their potential'*. It is also acknowledged that '*fear of crime can also prevent a wide range of groups from walking, especially at night in poorly-lit areas with lots of litter and graffiti*' (London Mayor's EDI Strategy, GLA, 2018). Similarly, Public Health England '*calls for joint working between the local authority functions of public health, spatial planning, transport, and parks and leisure to improve the use of good quality greenspace for all social groups to achieve better health outcomes and to reduce health inequalities*' (Public Health England, 2020). Therefore, equitable social value can potentially be added by flood defence development delivered through the Plan by; designing social infrastructure for protected characteristics, maintaining and improving safe physical and visual access for all to the river and riverside environment, enhancing and creating connective public realm and attractive blue/green/cultural space; and maintaining and developing continuous pathways that are inviting, safe and accessible to protected characteristic groups. However, it is essential that the Plan undertakes engagement with our partners, stakeholders, and communities to collaborate on developing place-based social value in and around flood defences in specific areas along the estuary. Table 2 embeds key targets from equitable social value policy, as a potential foundation for further discussion and development with partners and stakeholders. But ultimately, social value designed to promote social equity will be best informed by those that live and work there.

4.3.5.2.4. Upskilling

Social inequality and polarisation are major areas of challenge from the inner to the outer estuary. To reduce further inequalities along the estuary and drive social equity, the Plan will need to collaborate with partners, social enterprises, and stakeholders to upskill communities and improve their access to opportunity and resource, according to place-based needs i.e. identify and combat higher deprivation, bolster employment opportunities, support health and wellbeing and access to education. The Plan should work with partners and stakeholders to support pathways into higher value employment that are inclusive; and work with charities, education, and volunteer schemes to provide a springboard into sustainable employment opportunities (e.g. through paid apprenticeships, internships, volunteering, adult education schemes or enabling community skill sharing) for those that require more assistance in accessing these. Refer to Table 2 for other potential ideas. Supporting pathways to upskill and support Sustainability Champions will be important. Sustainability Champions are committed to breaking down the '*silos in education institutes, organisations, companies [and communities] to demonstrate that everybody has a role to play in sustainability*' (Alliance for Sustainability Leadership in Education, 2022). However, it can be especially hard for disadvantaged, diverse, or lower income individuals, to access the resource or development opportunities required for becoming a recognised sustainability champion. The Plan should consider how it can work with partners to create a sustainability multiplier effect (i.e. upskill and support diverse sustainability champions to empower them to continue breaking down the barriers to equitable sustainable development). The Thames Estuary 2100 Sustainability Framework itself should support supply chains who are embedding work experiences, internships, apprenticeships, or partnerships.

4.3.5.2.5. Diverse and cultural voices

It is particularly important that the Plan benefits from putting people and place at the heart of decision-making and enables all voices to be heard and celebrated, including cultural groups and those involved in the arts. Diverse socio-cultural viewpoints are likely to create new perspectives

on how to tackle social value as part of resilient flood defence schemes and create positive, creative social outcomes. In support, the Cultural Adaptations organisation states that '*building resilience to the impacts of climate change requires us to think very differently about the way we approach the development of the City Region'*. They also state highlight the import of '*working with cultural organisations and actors to explore new business models to contribute to city-scale adaptation. With society on the precipice of huge change as a result of climate change, culture has a significant opportunity to use its tools and methods to help shape how we respond'*. The Thames Estuary Growth Board (2021) is also keen to boost creativity within the wider Thames Estuary, having received funding for eight projects along the River Thames via the 'Creative People and Places Programme' who focus on parts of the country where involvement in arts and culture is significantly below the national average, which will help to level up the region. Cultural, Natural and Maritime Heritage landscapes will benefit from local participation.

4.3.5.2.6. Partnerships

The Plan should seek to engage with diverse social-facing organisations in order to develop positive, local partnerships that maximise partnership funding opportunities and can help the Plan create tangible social value on the ground in communities across the estuary (rather than only the usual TE2100 partners). For instance, diverse partnerships that seek to enhance, and recover the natural environment, rejuvenate recreational space, improve resilience, bolster cultural heritage, improve community cohesion, and drive sustainable economies to cultivate a sense of place (e.g., through nature-based solutions sustainable urban drainage systems, green jobs, resilient technologies). Partners may include local community organisations, community assemblies, Regional Flood and Coastal Committees (RFCCs), The National Lottery Heritage Fund, Arts Council England, Social and Landscape Enterprises, Wildlife Trust Catchment Funding, The Major's Green New Deal (2020) [with a social equity focus], the PLA, City of London and others, depending on place-based needs). Global case studies that demonstrate resilience to higher temperatures and higher sea level rise can also help inform different partners on the topic of sustainable and resilient development, as climate conditions worsen in the UK, such as the green corridors / fountains of Tivoli (Rome), as demonstrated by the City of London.

4.3.5.2.7. Access to the Plan and stakeholder engagement plans

There is also a need for the Plan itself to drive equality, diversity, and inclusion by ensuring information under the Plan is clear and accessible for all partners, stakeholders, and communities, and to provide opportunity for all levels of demographic to understand and contribute to the Plan. Therefore, there will be a need to consider written and visual styles and different mediums (i.e. languages, brail/auditory, digital, and non-digital, literacy levels/plain English, an inviting range of cultural tones suitable for the Thames Estuary area etc.). A clear and early introduction to the Plan's purpose and remit will also be important for developing trust with diverse partners, stakeholders, and communities, whilst establishing regular feedback routes for appraising the Plan's performance, throughout the Plan's lifecycle. The UN Sustainable Development Goals (alongside the Environment Act 2021 and Government Environment 25-Year Plan) are a recommended communication tool for the Plan to use when engaging with partners, as they provide a common language framework and help establish commonality between goals. However, before engaging with any of these groups, the Plan will need to undertake an inclusivity exercise to identify the full scope of partners, stakeholders, communities, organisations, and user groups that need to inform, shape, and consult on the Plan's delivery. The list should be both diverse, and adaptable to future social change as new social organisations form and social priorities are shaped by the impacts of climate change e.g. a live and interactive stakeholder plan that can be developed iteratively.

4.3.5.2.8. EDI-focused and ethical procurement

The public sector Social Value Model (2020) presents a step-change from the Social Value Act (2012) for central government, as it sets expectations for potential suppliers to develop a cohesive

and convincing social value offer if they want to win the tender contract and sets expectations to develop Social Value KPIs and measure progress against these '*throughout the procurement lifecycle'*. The model states '*to be effective it is essential that the contracting authority's consideration of social value starts at the pre-procurement stage and carries on through all stages of the procurement lifecycle*'. The model encourages a '*diverse supply chain'*. If the Thames Estuary 2100 Plan is to play a key role in levelling-up the estuary, flood defence infrastructure needs to deliver against the key principles in the Social Value Model and The Public Sector Equality Duty Act (PSED), from the earliest funding and planning stages (pre-procurement) and throughout the whole procurement value chain. Adoption of initiatives, such as the Ethical Trading Initiative's Base Code or tools such as Sedex (an ethical data exchange for suppliers), which set out ethical standards for operating and engaging with supply chains could enable the delivery of the Social Value Model principles. Social value and equity principles need to be embedded in the Thames Estuary 2100 programme culture, processes, and decision-making. The Plan should work collaboratively with our local government partners and in turn, our private sector stakeholders to agree a shared approach to embedding social value, ethics, social equity, and considerations for diversifying supply chains into procurement contracts as a decision-making criterion.

4.3.5.2.9. Adaptability

There are likely to be increased pressures on community resilience, social integration, health and wellbeing, and thus social equity as a result of the impacts of climate change. This may include displacement from hazards heat/drought/flooding stressors, the formation of new social organisations or structures, the impacts from the raising of defences and/or land raising, or pressures on existing land use from setback defences or encroachment etc. There are also likely to be other social changes over a 100-year period (i.e. changing geo-political or fluid socio-economic landscapes), which may affect community priorities for social value and social equity. Therefore, the Plan needs to ensure that flood development schemes are future facing, build in adaptive approaches and consider the infrastructure required to deliver the blue economy, to meet the current needs of the different areas within the Thames Estuary adequately and appropriately. These adaptive approaches include integrated working with major housing bodies like Peabody and insurance bodies like Flood:Re, where displacement will particularly affect deprived communities, but also looking at the blue economy, such as the hydro-economy (or other alternative fuels), and use of the river for transport/freight/workforce. There will also be a need to support and improve upon the latest planning control/enforcement around development boundaries, which incorporate sustainability within the estuary. Furthermore, there is a need to work with other infrastructure providers around delivering integrated social infrastructure for improving resilience and safety (e.g. RNLI / Tidal Thames Water Safety Partnership / Ports / Logistics / Paddlers and other river users). Continual engagement with diverse partners, stakeholders and with communities who monitor community resilience, and set priorities on the ground, will be essential to achieving this. It will also be important to collaborate with these parties to share the latest science data, modelling, predictions, and technologies in order to be flexible to future innovations in these areas. More examples in Table 2.

4.3.5.2.10. Measurements

The Plan should facilitate engagement with our partners and agree a shared methodology for how best to monitor and measure this enhanced social value (social benefits / social equity) across the estuary. A number of tools currently exist, ICE (V1.1): Maximising Social Value for Infrastructure Projects (2020) have developed Social Value Reporting Tools (SROI Network (Social Return on Investment, soon to be Social Value UK) and the mayor has developed a Social Integration Measurement Toolkit (if applied wider than London), DEFRA's Enabling Natural Capital Assessment tools will also be essential for measuring elements of social value, whilst the Social Value Model 2020 sets a framework for procurement to report Social KPIs against. Social Value can also be measured by '*quantification of the relative importance that people place on the changes they experience in their lives*' i.e. through Social Impact Assessment (Social Value, UK). Ultimately, the tools we will use to measure social outcomes will need to be discussed and agreed

with our social delivery partners as part of the Plan – the UN Sustainable Development Goals will be a useful overarching framework for this.

It is especially important that communities are also empowered to be involved in monitoring and measurements in order to bolster social value, such as in respect of undertaking Citizen Science (and recording this on open data platforms) as per Table 2, that can help citizens inform and understand any necessary changes within their own communities. There are ongoing initiatives, such as those run by Thames 21, City of London (CoL), Thames River Trust and Zoological Society of London (ZSL) etc. in the area of Citizen Science for the purpose of airborne emissions monitoring, carbon sequestration monitoring, microclimate changes, geomorphology monitoring, river quality/littering and so on.

Table 2. Key Social Value (SV) targets: Social benefits & social equity

Key Social Value (SV) targets: Social benefits & social equity *(to inform place-based discussions with partners)*		
SV target name	**SV target description**	**Supporting literature / quotes**
Maintain and enhance physical, and visual access, to the river and riverside environment along the Thames Estuary **Maintain and enhance connectivity along the whole extent of the Thames Estuary** **Encourage active citizens (non-motorised users (NMU) users)**	• Safeguard and enhance protected and valuable views to the riverside, especially where land or defence raising is required (visual access). • Maintain and enhance physical access to the riverside that is inviting, safe and suitable for all. • Maintain and enhance a continuous, barrier-free Thames Pathway that runs between the city and the outer estuary to enable shared access to opportunity and promote social integration. • Consider the interfaces between buildings, landmarks, and other heritage assets, infrastructure, walkways, and flood defences to maintain accessibility, and views of the Thames. • Maintain or improve journey travel times for NMU and bridge divides - connective public realm, green/blue space, promote active travel. • Consider linking the riverside up with other transport infrastructure schemes (NMU/public).	• The CoL Riverside Strategy (2021): Consider the '*interface between buildings, infrastructure, walkways and flood defences to maintain accessibility, and views of the Thames'* and '*enhance natural capital [and safety]'*. • The CoL Riverside Strategy (2021): local communities and river users should *'have quality and uninterrupted access to the riverside environment*'. • The Thames Estuary Growth Board Plan (2020): also seeks to '*improve access to green spaces and the riverside*' and take a '*coordinated approach to green spaces across the Estuary*'. • TFL's Healthy Living Streets for London (2017): states that people are more likely to use their local area when their journey is '*interesting, stimulating [and] with attractive views*'. • Others: - The Mayor's Social Integration Strategy (2017) - London Environment Strategy 2018
Design, improve and maintain places that feel welcoming and accessible for 'all' **Integrate knowledge of protected characteristic groups into social designs to reduce systemic inequalities and provide access to opportunity** **Create a sense of place that exudes an inclusivity culture, feels safe and secure and limits anti-social behaviours** **Create a cleaner, healthier, and better future for all citizens**	• Create place-based appealing and functional riverside landscapes/public realm that is informed by, and inclusive of, diverse cultures (and the arts). • Understand, and embed considerations for, protected characteristics into social value designs for infrastructure (in line with the Equality Act 2010) such as disability access, access for pregnant women etc. • Provide place-based safe, clean, attractive, and restful blue/green/cultural spaces, which improve biodiversity, recreational value, and enhance air/water quality - bolstering natural, social, and financial capital. • Create a strong sense of place through improving community cohesion through initiatives that encourages communities to share their experiences and expertise. • Make the most of urban habitats (such as pollinator habitats, small parks, heritage sites, or areas of public realm). Bolster connections to wider blue/green corridors	• Public Health England (2020): '*the most economically deprived areas have less available good quality public green space'*. • Public Health England: Analysis of monitor of engagement with the Natural England (MENE) survey data (2020): '*infrequent users of greenspace tend to be – people who are female; older; in poor health; of lower socioeconomic status; with a physical disability; ethnic minorities; people living in deprived areas; those with less local access to greenspace; and people living further from the coast'* • The Mayor's Equality, Diversion, and Inclusion Strategy (GLA, 2018): aims for *'a fairer, more equal, integrated city where people feel welcome and are able to fulfil their potential'* and suggests that *'fear of crime can also prevent a wide range of groups from walking, especially at night in poorly-lit areas with lots of litter and graffiti'*. • The Thames Estuary Growth Board (2020): are looking at the hydro-economy of the

Key Social Value (SV) targets: Social benefits & social equity *(to inform place-based discussions with partners)*		
SV target name	**SV target description**	**Supporting literature / quotes**
	and spaces to help level-up health and wellbeing across the estuary. • Work with partners to embed opportunities for a network of green-blue infrastructure, natural capital, offsetting, nature-based solutions, and green corridors (not just along the river, but from the river to the city [e.g. City of London/Tivoli case study]). Each, help provide a cleaner, healthier, and resilient future for citizens (i.e. aid against heat stress, nutrient changes, water excess and drought [including through Sustainable Urban Drainage - SuDS] and bolster air/water quality). • Provide light, clean, attractive, and sheltered pathways and resting spaces (away from traffic) that are resistant to graffiti and feel inviting and secure (make sure any lighting / LEDs are wildlife-friendly and informed by wildlife specialists). • Work with partners to provide affordable access to a range of active and sustainable opportunities (e.g. NMU/public transport schemes, recreational pursuits, a social value matching platform that enables community groups to request support from local organisations, etc.) and work with partners to ensure that all 'users' of the estuary know about these opportunities.	River Thames to create a '*cleaner, healthier and better*' future for all citizens. • Public Health England, 2020: *'calls for joint working between the local authority functions of public health, spatial planning, transport, and parks and leisure to improve the use of good quality greenspace for all social groups to achieve better health outcomes and to reduce health inequalities*'. • '*Tivoli is just over one square mile but has 20% greening in the city, compared to just 8% as an estimate for London*' (CoL,2022) • Others: The Mayor's Social Integration Strategy (2017) / EA Equality, Diversity, and Inclusion (EDI) Strategy & Action Plan, May 2022 / Thames Estuary Growth Board and Green Blue Action Plan (2020) / EA2025 Plan (2020) / FCERM Strategy (2021) / The ALGG Framework / Arts Council England / Commission for Architecture and the Built Environment (CABE) / Social Value, UK (2021) / ICE: Maximising Social Value for Infrastructure Projects (2020) / TE2100 Public Consultation (2022)
Further to rows 1 & 2 that also improve resilience: **Bolster the resilience of social systems to reduce increased pressures on social equity** **Champion Citizen Science and open data**	• Embed environmental net gain (ENG) (such as blue-green Infrastructure) and resilient, low-carbon materials into flood defence infrastructure designs to aid against heat stress, water excess and drought and to bolster air/water quality (particularly focusing on the more vulnerable members of society). • Undertake place-based assessment of resilience to inform flood defence adaptations and local action plans (e.g. Peabody housing/Flood:RE for displacement). • Work with partners on broader social value initiatives at the community level (including in schools) e.g. regenerative biodiversity, renewable energy / STEM (Science, Technology, Engineering, and Mathematics), regenerative agroforestry (farm to table) schemes. This will bolster the resilience of soils / the education system / landscapes / food & energy security, working with communities where it is most needed. • Invest in local technology, innovation, or the latest climate science to monitor the effects of the climate emergency and inform prevention, mitigation, adaptation (investigate the possibility to integrate technology near to, or onto structures). • Working with partners on integrated social infrastructure e.g. RNLI / Thames Tidal Water Safety Partnership / Logistics for safety and access / promoting active travel. • Embrace Citizen Science and open data across the estuary e.g. geomorphology	• National Infrastructure Commission, 2021: *'Taking an environmental net gain approach to infrastructure has many benefits, including: supporting natural capital by mitigating against climate change and flood risk, improving air and water quality, and improving quality of life delivering benefits efficiently, for example both achieving an infrastructure goal and increasing resilience'*. • IUCN (2019): *'Urban green and blue infrastructure is a critical ingredient for helping cities adapt to climate change, while providing numerous benefits for biodiversity and for local people's wellbeing'*. • https://www.thames21.org.uk/become-a-citizen-scientist/ • Others: The London Resilience Strategy (2020) / Improving access to greenspace - A new review: Public Health England (2020) / The UN Race to Resilience / Agriculture Act 2020 and ELMs (2022-4) / London Environment Strategy (2018) / The All London Green Grid (ALGG) / The Natural England Green Infrastructure Framework (2021) / The Mayor's Social Integration Strategy (2017) / Environment Act (2021) / FCERM Strategy (2021) / PLA Vision 2050 / The City of London presentation at PLA Vision conference (air quality/microclimate sensors).

Key Social Value (SV) targets: Social benefits & social equity *(to inform place-based discussions with partners)*		
SV target name	**SV target description**	**Supporting literature / quotes**
	(Thames 21), air / water quality sensors (CoL), carbon sequestration (ZSL). • Discuss place-based play, learning and recreation opportunities with partners (science/climate gardens, tidal beaches, community/food gardens, mural/science art, interpretation boards, illuminate light displays, floating islands, nature/heritage trails, play areas).	
Provide pathways for all to learning, upskilling and employment opportunities	• Work with the Social, Charity and Voluntary sector to upskill individuals, including routes to becoming a sustainability champion, but also provide a springboard to paid employment opportunities (Such as through schemes like the STEM Ambassador Programme). • Pair up with Research and Innovation programmes within universities or technology centres. • Invest in local circular economy materials and both diverse and map out circular supply chains that create millions of green jobs and resilient community networks. • Encourage fair treatment from 'return to work' across the Thames Estuary 2100 programme i.e. pregnant women, career breaks etc. where possible. • Increasing employment in hydro / blue / green economies	• Clydebank Agreement launched at COP26, 2021 • The Mayor's Equality, Diversity, and Inclusion Strategy (GLA, 2018): *'London suffers from socioeconomic inequality, which poses a threat to social integration'*. • Social Value, UK: '*NIACE believes that adult learning is essential, not only to create and maintain a more skilled and knowledgeable workforce, but also for personal development, and for a just, inclusive, and democratic society'*. • Others: The Mayor's Equality, Diversity, and Inclusion Strategy (GLA, 2018) / Government Levelling-up White Paper: Press Release (Feb 2022) / Social Value, UK / The Mayors Green New Deal (2020)/ Office of National Statistics (ONS).

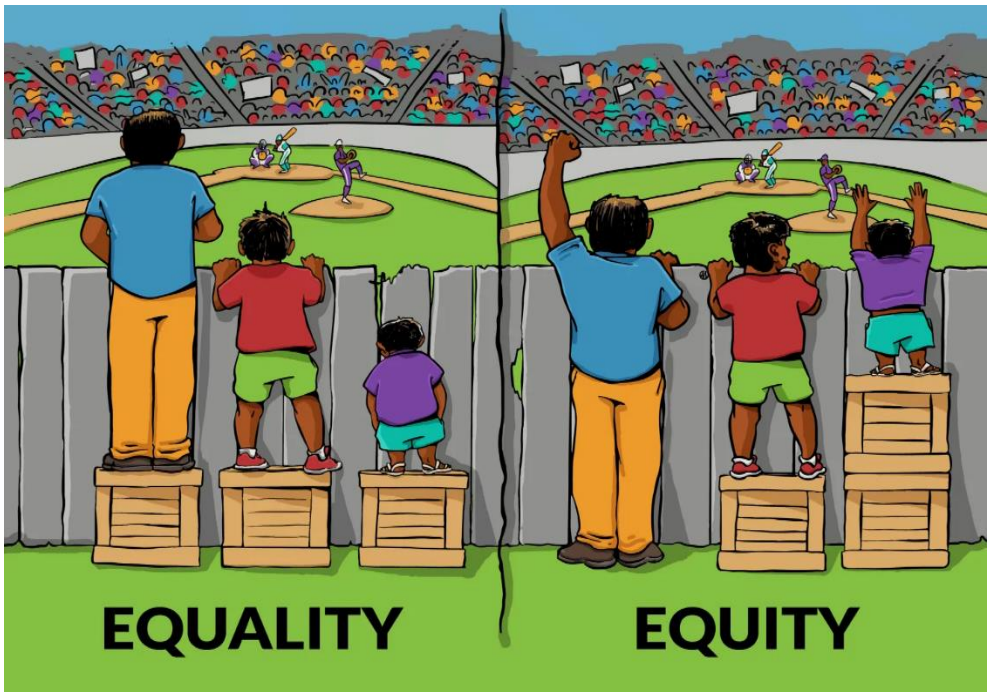

Figure 5. Equality vs equity cartoon.

Interaction Institute for Social Change | Artist: Angus Maguire. 2016. (interactioninstitute.org and madewithangus.com)

4.3.5.3. Social outcome goals

- Collaborate with diverse partners, stakeholders, and communities to ensure a diverse and inclusive approach to adding social infrastructure value that allows for flexibility to future social change and developments in social policy.
- Collaborate with Thames Estuary partners, stakeholders, and community groups to agree an approach that enables social equity to be delivered under the Plan.
- Drive community led approaches to deliver positive, creative social outcomes that put people and place at the heart of decision-making and enable all voices to be heard and celebrated.
- Promote social partnerships within the estuary and identify partnership funding opportunities that help realise the social benefits of flood risk management schemes.
- Establish with Thames Estuary partners an agreed approach to monitoring and measuring progress against social value and social equity within the estuary, including the use of citizen science.
- Drive equality, diversity, and inclusion by ensuring information under the Plan is clear and accessible for all, including for Sustainability Champions and provides opportunity for all levels of demographic to contribute to the Plan's delivery.
- Collaborate with Thames Estuary partners to support pathways into higher value employment, which are inclusive and work with charities, education, and volunteer schemes to provide a springboard into sustainable employment opportunities that upskill the workforce.
- Promote participatory design that involves stakeholders and end users in the early stages of design and develop a network for sharing best practices for delivering social value within the estuary.
- Promote the importance of social outcomes and collaborate with partners and stakeholders to embed social value, ethics, social equity, and considerations for diversifying supply chains into procurement contracts.

4.3.6. Overarching themes

A number of overarching goals were identified as they were considered to be applicable to all five of the key sustainability themes within the Sustainability Framework. The overarching goals were subsequently reviewed by the Sustainability Working Group (SWG) before being incorporated within the Sustainability Framework presented within this report.

Collectively, these goals outline overarching aspirations for the Plan such as the critical need for inclusive, transparent, and collaborative engagement with our partners and stakeholders across the estuary, the need to promote education and support communities transition to a more sustainable future; and the importance of championing place-based sustainability value through the Riverside Strategy Approach that will embed the needs of communities and users along the Thames Estuary.

The goals emphasise the natural capital approach as a leading mechanism for delivering the fundamental aspects of sustainability across all flood risk management schemes. Natural capital provides the bases upon which the other capitals sit, it provides the natural stocks of assets that help support financial, manufactured, social and human capital. The natural capital accounting tools associated with the approach have evolved over time and it will be important to build in monitoring and feedback to help bolster the tool further as we progress through the Plan's delivery.

The goals also emphasise the importance of an adaptive pathways approach to development across the estuary, which is responsive to social change as a result of climate impacts, emerging social policy, or changing social priorities over a 100-year period and that allows for the Plan to respond to emerging innovation, research, and technology. Focus is also drawn to the need to raise awareness of key mental health issues and champion these across the estuary, within the remit of the Plan.

The goals (across all themes) support the need for ‘Doughnut Economics’, which is a visual framework for sustainable development and enables all development to adhere to a number of planetary boundaries, in order that it can be viewed as ‘sustainable’ development (Figure 6).

Above all, the Plan needs to be communicated clearly. The overarching goals draw out the need to use standardised language to establish clarity and commonality, when engaging with partners and stakeholders within the Thames Estuary on the Plan’s development and delivery, such as the use of the UN Sustainable Development Goals, which are widely used as a framework for delivering sustainable development, by local government and other stakeholders.

4.3.6.1. Overarching goals

- Deliver sustainability across the Thames Estuary through a collaborative, transparent, and inclusive approach with partners, communities, and stakeholders.
- Drive a natural capital approach as the foundation to delivering all flood risk management schemes sustainably (improving net gains for air, water**,** and land quality).
- Partner and community strategies, plans and projects along the estuary are aligned to maximise air quality, water quality, and soil and land quality within the estuary (e.g. use of citizen scientists, renewable energy sources, creating ‘sponge habitats’ and sustainable urban drainage systems (SuDS)).
- Champion the Riverside Strategy approach and collaborate with partners to ensure it meets the needs of the communities and transient users along the Thames Estuary.
- Promote education on the importance of sustainability and support communities with the transition to a sustainable and equitable future for the Thames Estuary.
- Drive a sustainable and adaptable adaptation pathways approach that allows the Plan to respond to changes in economic and environmental innovations and technologies, as well as meeting societal needs (social drivers).
- Communicate and measure progress under the Plan by using standardised language such as the UN Sustainable Development Goals.
- Delivery of the benefits from the sustainability themes are achieved through collaboration with partner and community organisations to ensure efficient, mutually beneficial data collection using common language, data formats, technology and innovations, case studies, educational materials, measurements, metrics, and inclusion of local partner plans that connect to Thames Estuary 2100 work.
- Informed Shoreline Management Plans (SMPs) using the TE2100 Plan outcomes (e.g. carbon management, circular economy, habitat enhancements beyond biodiversity net gain 10% and compensation for TE2100 losses etc.) to make sure SMPs are cohesive and ambitious.
- Raise awareness, promote, and measure practical health and well-being outcomes through working with partners and stakeholders.
- Champion the notion of Doughnut Economics, which ensures planetary boundaries are taken into account sustainably, when making any development decisions (Figure 6). Sustainability is embedded early-on in all planning / delivery of projects, and the interdependent nature of the sustainability themes is clearly defined - delivering on one theme often has impacts across all. Therefore, each contribution clearly links to benefits delivery and the need to optimise opportunities within the Plan.

Figure 6. Doughnut Economics | Kate Rawling: A safe and just spacer for humanity: can we live within the doughnut?

(Doughnut Economic Action Lab, n.d.)

5. Conclusion and Recommendations

A review of sustainability legislation, policies, organisational commitments, and other workstreams under the 10-Year Review was undertaken to identify the key sustainability themes within this report. A collaborative question-generating exercise was subsequently undertaken by the multi-disciplinary Sustainability Working Group (SWG) in order to mind-map the key sustainability questions that the Sustainability Framework will need to answer under each of the identified themes. A technical summary was then developed based on each question against a further literature evaluation, to establish key priorities and opportunities for delivering sustainability within the estuary. Key sustainability goals were established from this technical summation, under each theme and further reviewed by the SWG. Through developing the goals, recommendations for the 'next steps' of the Thames Estuary 2100 Sustainability Framework were developed.

Due to the constant changing environmental, social, and economic conditions, an overarching recommendation would be to monitor the rate at which climate change and the 'Race to *[Net]* Zero' is unfolding. This may increase the urgency of some of the below recommendations, including community-based actions.

Therefore, the recommendations for the Thames Estuary 2100 Sustainability Framework are as follows:

5.1. Climate emergency

- Communicate with partners the need to adopt the Adaptation Pathways approach within flood defence development schemes, what it involves and how it can integrate with the Riverside Strategy Approach for their own area. Share learning and best practises on applying the adaptation pathways approach to understand how others have tackled this challenge.
- Initiate discussion with partners and stakeholders on creating a cohesive and strategic net zero and environmental net gain approach across the estuary and establish investment and funding avenues for achieving resilience.
- Initiate discussions with partners and stakeholders on developing their own area-appropriate natural flood management (NFM) approach through the Riverside Strategy Approach to achieve resilience within the estuary.
- Agree with partners and stakeholders a consistent cross-boundary approach to measuring and reporting on resilience and raise awareness of the UN Race to Resilience Metrics[1].
- Initiate discussion with communities within the estuary to establish their resilience to climate change, understand public attitudes to climate risks, such as flood risk, set up a monitoring programme to determine progress on improving their resilience and actively involve them in the decisions affecting their local environment and community.
- Set up a shared platform with partners and stakeholders for mutual benefit that tracks, monitors, and continuously reviews emerging innovation, best practises, policy, materials, data[2], and technology that contribute to climate resilience. Data should be made readily accessible and critical updates should be communicated to users.

[1] *This metric is currently for non-state actors (e.g., non-governmental organisations)*
[2] *Data can be real-time, predictive, demographic, inequality, deprivation, or other data.*

5.2. Carbon management

- Identify ways to work with partners and stakeholders to adopt the IEMA greenhouse gas management hierarchy and share best-practise examples (e.g. ways to eliminate or reduce emissions, adopt renewables, and low carbon technologies, implement appropriate nature-based solutions and offset unavoidable emissions).
- Establish partners timescales, priorities, and investment points for reaching net zero, as part of a cohesive approach to achieving net zero across the estuary. Think ambitiously in respect of 2030 targets and identify any barriers to achieving net zero by 2030.
- Develop a carbon infrastructure management approach to asset management (e.g. PAS2080) that encompasses all flood risk management assets (fixed and active), addresses all stages of the asset lifecycle, and can adapt and influence development pathways when improved or sufficient data becomes available.
- Review the impact that low carbon asset management options could have on future asset deterioration rates and the associated timing of intervention works.
- Establish with our partners how participation of communities e.g. local scientific stakeholder groups, universities or citizen scientists can contribute to emissions monitoring (e.g. sensor technology, sequestration measurements, etc.).
- Establish an adaptable carbon reduction approach with partners that reacts to policy changes, advances in low carbon materials and technology, and indicators for a changing climate, and continue to take steps to reduce greenhouse gas emissions within the estuary.

5.3. Circular economy

- Undertake research into sourcing, procuring, storing, sharing, planning out and supplying of materials and map out the availability of resources to minimise natural resource inputs and reduce waste and emissions production.
- Establish a proactive, open-source data network to share best practise and innovation, monitor and report on progress and outcomes, record feedback and communications and maximise partnership and stakeholder opportunities for healthy (non-toxic) circular systems including sourcing / design / construction / deconstruction at enterprise and supply chain level.
- Establish a flexible circular economy approach with partners that is adaptable to policy changes and market trends, including renewable energy markets / socio-environmental standards / policy / sourcing /materials / equipment / engineering and technology / design advancements / data / innovation / systems.
- Establish a monitoring and recording programme on material health, toxicity, and performance to drive healthy circular supply chains within the Thames Estuary and ensure that safety and circularity are seen as mutually inclusive.
- Identify and map out with partners, stakeholders, and community groups where ‘regeneration’ of natural systems (e.g. habitats, biodiversity, soils, or agriculture) is most valuable or constrained within the Thames Estuary and look to maximise partnership opportunities in doing so.
- Establish partner’s aspiration and imperatives for renewable energy and energy consumption. Identify the applicability of different renewable energy types within different areas of the estuary and the space required to provide the energy demand, by working with partners and communities.

- Work with partners to identify and explore possible further funding sources that may be available to support the development of Riverside Strategies that seek to ensure the riverside best serves the needs of the communities and the environment through a circular economy.
- Work with our partners to agree responsibilities for driving measurable improvements to abundant circularity. Including ways to maintain and support healthy and inclusive circular economy supply chains and embed circular economy approaches at every level of decision-making within their own organisations, which conform to a robust set of sustainable socio-environmental targets, within planetary boundaries.

5.4. Nature recovery

- Engage with partners and stakeholders on natural capital to share education around the approach and emphasise a natural capital programme in order to identify challenges and shared opportunities, map out areas of planned redevelopment, and develop an integrated delivery approach.
- Complete a full baseline natural capital assessment of the tidal Thames comprising of a qualitative assessment of all ecosystem service values delivered, and undertake quantification and monetisation of these values, where possible. Then assess the impacts of the Plan's options against this baseline.
- Undertake a monitoring programme to identify areas of improvement for the Natural Capital Framework and integrate identified lessons learnt and improvement opportunities from the application of the NCRAT[3] tool to the present Natural Capital Framework to avoid duplication of effort.
- Establish where natural capital methodology and implementation will sit within the whole value chain by following framework guidance to integrate natural capital into the economic evaluation and appraisal process, including working with partners to understand the ways that monetary values can fit in with the cost/benefits process.
- Facilitate conversations with partners on taking a strategic natural flood management (NFM) approach using the Riverside Strategy as a basis for discussions and establish a shared mechanism for mapping out NFM across the estuary. Implement a NFM performance monitoring programme.
- Undertake research, strategically plan, and implement with partners ways to incorporate blue / green infrastructure into the estuary (e.g. SuDS, living walls, rooftop, heat abatement etc.).
- Initiate conversations with partners and stakeholders around collaborative carbon offsetting that ties in with their local nature delivery plans and map out any shared opportunities for delivery. Establish how to feed local habitat creation from the framework into local / national mapping initiatives.
- Ensure the Thames Estuary 2100 Sustainability Framework, partners and stakeholders are aware of, and using the Natural England Biodiversity Net Gain Best Practise Principles for mandatory biodiversity net gain, the latest Biodiversity Net Gain Metric Tools[4], and the DEFRA biodiversity mitigation hierarchy.

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[3] *NCRAT Definition: The Environment Agency's 'Natural Capital Register and Account Tool' (NCRAT).*
[4] *As of 2022, the latest tools include: The Small Sites Metric (JP040) & The Biodiversity Metric 3.1 (JP039), which includes intertidal assessment. Further consultation on the wider marine area is underway.*

- Establish if there are any appropriate opportunities to align or connect local biodiversity net gain (BNG) or environmental net gain (ENG) initiatives between partners, especially those that enable a coherent ecological network, considering the BNG good practise principles, and agree with partners and stakeholders on the ownership of BNG implementation, management, maintenance, and monitoring.
- Explore the potential for natural capital assessments to be integrated with wider sustainability objectives of SEA, net zero and BNG (possible in a singular over-arching framework). Investigate both the limitations and opportunities for aligning these frameworks and the data required to deliver them.
- Ensure the Thames Estuary 2100 Sustainability Framework, partners and stakeholders are aware of, the four key goals, and 23 targets for 2030 that were globally agreed in the landmark 15th UN Biodiversity Conference held in Montreal (COP 15) and work with partners to agree an approach to adopt and embed these goals and targets.

5.5. Social outcomes

- Establish and record the equality, diversity and inclusion needs for access to the Plan, in line with the Equality Act 2010, and make the Plan accessible for different audiences (including partners, stakeholders, and communities). Consider how the Plan might be geographically structured for users to look up information based on location/s.
- Develop a mechanism with partners (using suitable tools and resources) to identify, plan and record engagement with stakeholder, and continuously update the list of stakeholders delivering social outcomes within the estuary i.e. a live interactive Stakeholder Engagement Plan that builds in all voices[5], including those that are not considered to be 'traditional' Thames Estuary 2100 key delivery partners.
- Utilise the interactive Stakeholder Engagement Plan to initiate conversations with the cultural, heritage and arts sectors on creative ways to add value to their areas; including by adopting a 'participatory design' approach, which involves engaging stakeholders, partners, and end users in the earliest stages of design to ensure the results are appropriate and usable.
- Undertake early and regular engagement with Thames Estuary partners and stakeholders to map out their priorities and drivers for adding social value, establish their social equity baseline[6], allocate responsibilities for delivery and develop an adaptable benefits realisation plan.
- Initiate discussions with partners to advocate the Riverside Strategy Approach as a basis for discussion with communities to understand how their place-based needs can be built into a riverside strategy and implemented for their own area in order to enhance the social, environmental, cultural, and commercial value of local communities[7].
- Collaborate with partners and stakeholders (who can influence their supply chains) to work out ways to support pathways into higher value employment that are inclusive - and work with charities, education, and volunteer schemes to provide a springboard into sustainable employment opportunities.
- Establish a shared learning platform where the parties involved in delivering the Plan can work together to share best-practises case studies for social value and social equity, pool

[5] *Including, but not exclusive to, riparian owners and developers, which are major engagement areas.*
[6] *Unequal access to green space is a driver / indicator for social inequity from the inner to outer estuary, so natural capital and regeneration need to be considered, as well as access to trade, jobs, opportunity etc.*
[7] *This includes maintenance / enhancement of physical and visual access to the riverside, among other wider benefits.*

information on demographics and the latest available data /innovation / technology; and use this information to agree a shared approach to delivering social value and equity that is adaptable to future change.

- Engage partners to agree on a common framework for monitoring and measuring social equity and social value and implement and agreed framework throughout the lifetime of the Plan.
- The Plan should work collaboratively with our partners and stakeholders to agree on a shared approach to diversifying supply chains, forming new partnerships, and embedding social value social equity and ethics into procurement contracts.
- Monitor the emerging changes in social or political policy, social changes in communities, and the impacts of climate change in order to adapt to the new social priorities within the Thames Estuary.

5.6. Overarching

5.6.1. The UN SDGs

- Agree with partners an approach to delivering the UN Sustainable Development Goals (SDGs) within the Plan. Discuss the inclusion of partner data in delivering, monitoring, and reporting against the UN SDGs, such as the quality and frequency of the data, and undertake dialogue on the responsibility of delivering / monitoring / measuring and reporting progress against the UN SDGs.
- Provide internal and external training on the delivery of the UN Sustainable Development Goals (UN SDGs), including how these can be integrated within the appraisal, evaluation, and benefits process, and be utilised as a common language to communicate with partners and stakeholders on sustainability for shared delivery across the Thames Estuary.

Sustainability performance indicators

- Investigate the range of key sustainability performance indicators that will help to measure progress against the Plan's sustainability themes and influence high-level options and agree these with partners (e.g. the UN Sustainable Development Goals, natural capital, monitoring, social value / integration / equity indicators, etc.). Start to consider how, and whether, these might eventually integrate together.

Riverside Strategy Approach

- Work with partners to adopt and advocate the Riverside Strategy Approach as a basis for the delivery of sustainability benefits suitable for their own area. Document and share lessons learnt from existing Riverside Strategy pilots, work with partners to strengthen local plans and policies to support the Riverside Strategy Approach under the Plan to deliver a clearly articulated vision for the future of the riverside.

Benefits

- Align the Thames Estuary 2100 Sustainability Framework with the Thames Estuary Benefits Realisation Plan using mutual language that allows the two products to be combined for delivery under the Thames Estuary 2100 10-Year Review.

Strategic Environmental Assessment (SEA)

- Incorporate into the Sustainability Framework any updates from the Strategic Environmental Assessment (SEA) undertaken for the TE2100 Plan options; and consider any opportunities to use the SEA process to embed other processes from the framework into future SEA (e.g. natural capital, UN SDGs).

Share Promotion

- Encourage shared promotion of the best practises being undertaken through the Thames Estuary 2100 Plan, including recognition of the Plan in partner and stakeholder plans and strategies, as well as recognition of partner and stakeholder best practises in Environment Agency documents.

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Appendices

Appendix A – Product Description 6.4 Sustainability Framework Product Description

Project name	Thames Estuary 2100 10-Year Review
Project SOP reference	ENV0001912C
National project number	
Programme name	Thames Estuary 2100
Area	London
Team and location	Thames Estuary 2100 team, 2 Marsham Street
Date	29 November 2021
Version number	C01
Author	Angela Gorman (EA)
10-Year Review Workstream	Sustainability
Workstream Lead (product senior user)	Dave Cuthbertson
Product title	6.4 Sustainability Framework
Product Owner (product senior supplier)	Emily Smyth (Mott Macdonald)
Identifier	WS06/6.4/Sustainability Framework

Project governance arrangements

Project Sponsor	Julie Foley
Project Executive	Sarah Smith
Senior User	Abby Crisostomo / Dave Cuthbertson
Senior Supplier	Emily Smyth (Mott Macdonald)
Project Manager	Clive Herring

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Product Description history

Document location

This document is uncontrolled when printed.

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Revision history

Revision date	Summary of changes	Version number
16/02/21	First issue	P01
15/04/21	Second issue	P02
29/11/21	Updates made following assignment of Senior Supplier and approved for sign-off	C01

Approvals

This document requires the following approvals.

You must file the signed approval forms in the correct part of the project filing system.

Name	Signature	Title	Date of issue	Version
Sarah Smith	Sarah Smith	Project Executive	26/01/2022	C01
Dave Cuthbertson	Dave Cuthbertson	Senior User	29/11/2021	C01
Emily Smyth	Emily Smyth	Senior Supplier	13/01/2022	C01

Distribution

This document has been distributed to:

Name	Title	Date of issue	Version
Abby Crisostomo	Senior User	16/02/21	P01
Helen Berthonneau	Implementation Team Leader	16/02/21	P01
Laura Littleton	Benefits Workstream Lead	16/02/21	P01
Clive Herring	10 Year Review Project Manager	16/02/21	P01
Simon Dawes	Sustainability Manager EA National	16/02/21	P01
Joe Guy	Sustainability lead for TEAM2100	16/02/21	P01
Emma Winchester	NEAS lead for SEA for TE2100	16/02/21	P01

Identifier

WS06/6.4/Sustainability Framework

Title

6.4 Sustainability Framework

Purpose

The purpose of this product is to develop a Sustainability Framework that sets out the Vision for how the Thames Estuary 2100 Plan (the 'Plan') will be delivered sustainably, promote sustainable development in the Thames Estuary and deliver against the Environment Agency's eMission2030 sustainability goals. This framework will not only set out the vision, but also a set of principles, promoting innovation and suggested actions/recommendations on what needs to be achieved as part of the Plan. It will summarise the current activities and practices (related to sustainability) that are or can be embedded now and what activities are needed to understand what more is required going forward. The product will recommend our sustainability ambition, current or future targets, monitoring and governance of sustainability to be incorporated within future updates to the Plan. It will align with achieving benefits as outlined in the benefits workstream products. This product will be used to understand how to embed sustainability more strongly into the Plan and enable us to make it more clear what needs to be done by all parties, including external partners, to deliver the Plan sustainably.

An output of the Framework will include a high-level report on the baseline conditions. This will be derived from readily available products, reports and data and include evidence on the asset management programme and current sustainability reporting in the project area. The report will not propose new baselines or indicators, but will make recommendations for this. It will be consistent with recommendations from the EA's Sustainable Business Team in regard to evolving sustainability reporting mechanisms. This preliminary analysis will allow the identification of data and knowledge gaps and inform proposed actions, new products and recommendations as part of the Framework. In developing the Vision, the product will suggest sustainability principles that will support and guide related Thames Estuary 2100 work e.g.Net Zero Carbon actions, incorporating UN Sustainable Development Goal's, resource management, environmental net gain objectives and sustainable procurement. The proposed further actions and recommendations which will form part of the Framework will identify a route map for the incorporation of Sustainability Goals into the Plan and identify where further work needs to be scoped to achieve this.

Composition

The development of a Sustainability Framework will consider the following aspects:

- A review and discussion with Environment Agency teams (including TEAM2100 and national Sustainable Business team) on current guidance, best practice approaches and internal methodologies that need to be followed to incorporate sustainability assessment into the Thames Estuary 2100 Plan delivery (from design to implementation). This will include review of other relevant EA/Defra strategies.
- An analysis and summary of how the revision of the SEA (Strategic Environmental Assessment) for the Plan will connect with the emerging Sustainability Framework.
- Define an agreed meaning for Sustainability and Sustainable Development in the context of the Plan, as approved by the project board.
- Recommend sustainability principles to be followed in the revised Plan, and consult on these for approval.
- Consideration of the high-level report on baseline conditions, with identification of selected sustainability indicators in the project area (where possible) which are likely to influence or be influenced by the Plan's high-level options. A summary of data and/or product or knowledge gaps will be included with recommendations for next steps.
- Review the current thinking and emerging evidence on sustainability themes. To propose recommendations for actions to incorporate sustainability targets into future updates of the Thames Estuary 2100 Plan, ensuring that this aligns with achieving the Plan's benefits. Include applying best practice approaches to inform (amongst other things to be

determined); options appraisal, support whole life carbon accounting, achieving low and no carbon goals in future (assist in identifying opportunities to deliver Net Zero Carbon by 2030), resource management and circular economy schemes, environmental net gain, wider community benefits (or social value) and sustainable procurement.
- Ensure the framework demonstrates leadership in the field of climate change resilience and adaptation pathways for the Plan (including reference to renewable energy options for mitigation)
- The timeline of ambitions and principles will be considered and discussed with governance boards.

Derivation

The Sustainability Framework will be influenced by and derived from the following datasets/information:

- Relevant Products in the 10-Year Review, especially those from Sustainability, Benefits, Habitat, Economic Case Review and Review of Recommendations workstreams.
- Results of equalities impact assessment and social value research.
- EA National Sustainable Business team guidance and data – this will ensure a consistent approach to development of the framework and the approaches to be applied. It will support a robust and consistent approach to the recommended development of metrics, measures and monitoring of sustainability goals agreed.
- TEAM2100 Sustainability analysis and look towards future Asset Management needs.
- Tideway Corporate Responsibility and Sustainability Policy.
- Responses from consultations with internal and external partners.
- A similar body of work is due to be undertaken by the OxCam team (EA and Natural England led), with stakeholders. A review of this will be undertaken to establish if there are approaches that can be used to inform the Thames Estuary 2100 work.

Format and presentation

The product will be a report written in MS Word / PDF. There will also be a supporting material to illustrate the overview and recommendations.

It is likely that the report will come in two stages, with the final stage focussing more closely on the connection with the Benefits Realisation Plan, including actions and considering appropriate metrics for delivery of the sustainability goals.

The report in stage 1 will detail the following:

- Introduction – this identifies the needs of the Environment Agency and for the Thames Estuary 2100 Plan to account for Sustainability in its continued development.
- Review Summary – a section describing the reviews and analysis carried out to support the development of the Plan's Sustainability Framework.
- Agreed Thames Estuary 2100 vision for sustainability, to deliver the Plan's aims.
- A Thames Estuary 2100 Sustainability Framework Proposal – A section which describes actions, targets, potential indicators and methods to be applied to the continued delivery of the Plan.
- Recommendations (for next steps) and suggested Action Programme. To include references to other more detailed sections of the plan, e.g. Habitats or Asset Management Plan.
- Information and Data Requirements – A section which describes the data/metrics and information sources required to implement the Framework and identifying known information gaps at this initial stage 1 report.

Quality criteria

The detailed scope and proposal for this product shall be agreed with the Senior Users and Project Executive. The quality of the product will be assessed by the Senior Users, taking advice from relevant persons as required.

Project Governance process applies. The product to be developed will need to be approved by the Project Board. Appropriate internal / external review to be undertaken before submitting to Project Board for Approval.

The Senior Users will advise the Senior Supplier of any quality risks or issues and escalate these as required through the Project Board and governance boards as appropriate.

When the report has been drafted it will be shared with the EA National Sustainable Business team. Relevant Thames Estuary 2100 team members, which includes members of other EA teams (e.g. TEAM 2100, 10-Year Review Workstream Leads and/or Product Owners, Thames Estuary 2100 Implementation) and Darren White (Tideway) for comment before it is finalised. The above teams will input from the outset of the drafting process.

Quality tolerance

The senior user will advise on quality tolerances and advise the senior supplier if the product is out of tolerance.

Quality method

Quality assessment will be undertaken through review of outputs and interim outputs for the product by the Senior User and others (as identified by the Senior User). The review requirements will be identified by the senior user before work commences.

Quality method	Description
Check against EA procedures/guidance	National teams in review stages to support.
Check against other guidance	EA and Defra policies/strategies
Scope review	Check against Scope

Quality skills required

Quality method	Skills and/or resources
Understanding and experience in application of Sustainability Goals to strategies	Review group is selected due to their skills in this area.
Overview of Review project and place of economic losses within it, including any dependencies	Sarah Smith (Project Executive)

Quality responsibilities

Producer	Emily Smyth (Mott Macdonald)
Reviewer(s)	Angela Gorman (Workstream Lead) Darren White (Tideway Sustainability Lead) Simon Dawes (National Sustainable Business Team)
Approver(s)	10-Year Review Project Board: Sarah Smith (Project Executive)

IPR ownership

The Environment Agency will be the owner of the Intellectual Property Rights (IPR) of this product.

Product acceptance

Signature of product approver (as documented on the Quality Register)	Actual approval date (as documented on the Quality Register)

Appendix B – The Plan's Strategic Environmental Assessment (SEA)

Strategic Environmental Assessment (SEA) is a systematic assessment process for evaluating the environmental implications of a proposed policy, plan, or programme.

It involves looking at cumulative effects from a proposed policy, plan, or programme, in order to appropriately address them at the earliest stage of decision making, alongside economic and social considerations.

A Strategic Environmental Assessment (SEA) Screening Determination has been produced as part of the Thames Estuary 2100 Plan 10-Year Review. The purpose of the Screening Determination is to set out the Environment Agency's view on whether SEA is required for the update to the Thames Estuary 2100 Plan and subsequently to consult with the relevant statutory consultation bodies on our proposed screening decision.

A SEA was published in 2009 for the first Thames Estuary 2100 Plan, which was published in 2012. The existing SEA for the Thames Estuary 2100 Plan [Thames Estuary 2100_P402_Pr23 (T1403) Strategic Environmental Assessment - Environmental Report] identifies potential significant effects in association with all of the options.

Following an examination of the outcomes of the Thames Estuary 2100 Plan 10-Year Review, the Screening Determination did not identify any new findings or significant effects of the proposed options within the updated Plan.

Based on the work carried out for the 10-Year Review, the change to the intervention deadline for the first upstream defence raising under Option 1.4 from 2065 to 2050 is not predicted to result in new or additional significant impacts either.

On this basis, an update to the SEA and preparing an Environmental Report at this time is not intended. The need will continue to be reviewed as work on the updated Plan progresses.

Appendix C - Review of Relevant Sustainability Material

This section outlines the core UK legislation, policies, industry standards and partnership commitments that have been key to developing a successful Sustainability Framework for the Thames Estuary 2100 10-Year Review (specifically Product 6.4: Sustainability Framework).

The Thames Estuary 2100 Plan 10-Year Review literature review helped to develop five core sustainability themes that were refined further in collaboration with the Sustainability Framework's Sustainability Working Group (SWG).

Key sustainability questions were formulated around each core theme. A technical summation (or answer) was then formed around each sustainability question. This process output the critical goals and further recommendations for the Thames Estuary 2100 Plan. Further literature reviews and discussions with experts were undertaken to support this process.

The Thames Estuary 2100 Plan should align with these core legal acts and standards, governmental policies, industry-leading commitments, and partner plans to ensure that sustainability is effectively implemented and coordinated across the estuary.

This section follows the following format:

- Table 1: Relevant UK government legislation for sustainability ("Legislation").
- Table 2: Relevant UK government sustainability commitments, including departments, agencies, bodies, and executive non-departmental bodies ("Government Commitments").
- Table 3: Relevant industry standards for sustainability ("Sustainability Standards").
- Table 4: Partners' organisational commitments for sustainability to the point of production, additional to above and including the Environment Agency ("Other Partner Commitments").

A governance list should be reviewed and updated quarterly, to ensure the Plan is in alignment with relevant sustainability policy, emerging partner plans and industry standards.

This will strengthen the Plan's status as a world-leading adaptation strategy that is reactive to change, embeds a range of critical sustainability governance and is future-facing.

The separate 'References' section includes the full list of references that were used to develop the content for the Thames Estuary 2100 10-Year Review Sustainability Framework (Product 6.4) and includes articles influencing sustainability in current or future industry.

Table 3. Relevant UK legislation

Legislation	Summary	Significance to the Sustainability Framework	Reference
Agriculture Act (2020)	Legislative framework for replacement agricultural support schemes. Provides powers to implement new approaches to farm payments and sustainable land management. In England, farmers will be paid to produce 'public goods' such as environmental or animal welfare improvements.	• Sets out how farmers and land managers in England will be rewarded in the future with public money for “public goods” to make environment and sustainability improvements to their land. • These incentives will provide a vehicle for achieving the goals of the government’s 25 Year Environment Plan and the commitment to reach net zero emissions by 2050. Influences the framework to work with partners on carbon management, nature recovery and resilience. The act links to concepts from the Defra Environmental Land Management Schemes (ELMs). The act could also potentially influence the framework to add social value.	Agriculture Act (2020). Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/2020/21/contents [Accessed February 2022].
Climate Change Act 2008 (as amended in 2019)	Commits the UK to reduce greenhouse gas emissions to net zero by at least 100% of 1990 levels (net zero) by 2050, encourages activities that reduce or remove these emissions from the atmosphere. Other commitments involve tackling use of plastic and reducing domestic waste.	• To amend the provisions of the Energy Act 2004 regarding renewable transport fuel obligations. • To make provision for carbon emissions reduction targets. • Confers powers for schemes that provide financial incentives to produce less domestic waste and recycle more. • Establishes the world’s first legally binding national framework to reduce the UK’s greenhouse gas emissions by at least 100% of 1990 levels, by 2050. Otherwise known as ‘Net Zero by 2050’. Influences the framework to work with partners on the requirement to reach net zero by 2030 to 2050 (the former, an Environment Agency target, the latter the UK 'last target’). Influences the framework to monitor carbon and other airborne emissions, utilise renewable transport/site fuels and ensure compliance with ‘designing out waste’, as part of circular economy and carbon management. Can also have influence on nature recovery within the framework.	The Climate Change Act 2008 (2050 Target Amendment) Order 2019. Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukdsi/2019/9780111187654 [Accessed January 20, 2022].
Climate Change and Sustainable Energy Act 2006	To enhance the UK’s contribution to combating climate change. Includes alleviating fuel poverty and securing a diverse and viable long-term energy supply.	• The government must set and meet national targets for the number of installed microgeneration systems. • Requires the government to report to Parliament annually on the level of greenhouse gas emissions in the UK and action being taken to reduce it. • Carbon emissions obligation will encourage consumers to improve efficiency and use electricity / heat from microgeneration and low emission sources. • Government must promote community energy projects. Local planning authorities may influence the success of community energy schemes through conditioning planning permissions. Influences the use of renewable energy within the sustainability framework, in partnership with Local Authorities, energy providers and communities to transition to a low carbon/circular economy. Also influences the framework to monitor and address its whole life carbon emissions.	Climate Change and Sustainable Energy Act 2006 C.19. Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/2006/19/contents [Accessed October 21, 2021].

Legislation	Summary	Significance to the Sustainability Framework	Reference
Environment Act 1995	Established the Environment Agency and the Scottish Environment Protection Agency. To make provisions on areas such as contaminated land, abandoned mines, national parks and controlling pollution and waste. The Environment Act 2021 (further below) does not revoke or replace the Environment Act 1995, but it does make amendments to strengthen and enforce adoption of the environmental provisions.	• To make provision for the control of pollution, conservation of natural resources and conservation or enhancement of the environment. • To make provision in relation to fisheries and introduce the National Air Quality and Waste Strategies. • Section 57 of the Environment Act (1995) inserted Part IIA into the Environmental Protection Act (1990) and created a new statutory regime for the identification and remediation of land defined as 'contaminated' and abandoned mines. Local authorities are the primary enforcers of the regime. Important when partnering with local authorities (and other stakeholders) to deliver compliance for identifying and remediating contaminated land, controlling pollutants and waste; and conserving natural resource through avoided or reduced impacts. Also makes provision to 'enhance' the natural environment, which could be achieved through environmental net gain (ENG), natural capital and as part of implementing a circular economy to design out waste, and regenerate nature.	Environment Act 1995 C. 25 Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/1995/25/contents [Accessed October 18, 2021].
Environmental Permitting Regulations 2010	Outlines business activities that require an environmental permit. Including mobile plant installations, waste operations, radioactive substance activities, water discharge and groundwater activities. The 2010 Environmental Permitting Regulations replaced the 2007 regulations by extending the range of activities that require a permit. Permits are granted by the Environment Agency.	• Provide industry, regulators, and others with a single extended permitting and compliance system, called the Environmental Permitting System. This includes: • Waste management licensing • Pollution prevention and control • Water discharge consenting • Groundwater authorisation • Radioactive substances regulation Permitting compliance that sustains the natural environment, but also encourages delivery of net zero through waste management. Beyond compliance, influences the framework to 'design out' waste, prevent pollution and review material health through the implementation of a circular economy.	The Environmental Permitting (England and Wales) Regulations 2010 (SI 2010/675). Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/uksi/2010/675/contents/made [Accessed October 18, 2021]. The Environmental Permitting (England and Wales) Regulations 2010. Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukdsi/2010/9780111491423/contents [Accessed October 18, 2021].
Environmental Protection Act 1990	Made provision for improved control of pollution from certain industrial and other processes. Also provided provision for collection, treatment, management, and disposal of waste, conferring powers to keep public places clean of litter and place further control on potentially hazardous waste.	• Integrated pollution control and air pollution control duties by Local Authorities. • Respects the functions of regulatory authorities concerning collection, treatment, tracking, management, licensing, and disposal of waste. • Refers to the National Waste Strategy and waste management practises, plans for reducing waste. • Provisions relating to control of litter. • Further provisions for the contamination of land and the creation and constitution of new councils for nature conservation. Legislation that seeks to safeguard the environment to reduce land, air and sea pollution and design out / manage waste.	Environment Protection Act 1990 C. 43s. Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/1990/43/contents [Accessed October 19, 2021].
Flood and Water Management Act 2010	Placed a range of new duties and responsibilities upon Local Authorities, the Environment Agency, and other partners in relation to the management of flood and coastal risk. The main new duties for Lead Local Flood Authority (LLFA) are to develop, maintain, apply, and monitor a local flood risk management strategy in its area which covers flood risk from surface run-off, groundwater, and ordinary watercourses.	• Addresses the climate emergency by providing approaches for nature-based solutions and through provisions on sustainable drainage, reservoirs, property repairs and incidental flooding or coastal erosion of land. • Puts a duty on flood and coastal erosion risk management authorities to aim to contribute towards the achievement of sustainable development when exercising their flood and coastal erosion risk management functions. • New duties and responsibilities upon Local Authorities, the Environment Agency, and other partners for managing flood and coastal risk. Framework should deliver sustainable development benefits when exercising flood and coastal erosion risk management functions, including working with local partners to deliver these benefits. Influences the framework to consider inclusion of sustainable urban drainage systems (SuDs), natural capital and natural flood management (NFM) (among others). Also influences the framework to help communities prepare for, and manage, the consequences of local flooding and coastal erosion.	Flood and Water Management Act 2010 C.29. Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/2010/29/notes [Accessed October 21, 2021]. Flood and Water Management Act 2010 – Local Flood Risk Strategy. Available at: https://www.york.gov.uk/LocalFloodRiskStrategy [Accessed October 21, 2021].

Legislation	Summary	Significance to the Sustainability Framework	Reference
Natural Environment and Rural Communities Act 2006	Makes provision about bodies concerned with the natural environment and rural communities. The creation of the body known as Natural England with functions relating to the natural and rural environment.	• Makes provision in connection with wildlife, Sites of Special Scientific Interest (SSSIs), National Parks, and the Broads. • Makes provision in respect of nature conservation, biodiversity, pesticides harmful to wildlife and the protection of birds, and in respect of invasive non-native species. • Conserving and enhancing the landscape. • Description of the powers by Natural England and the Commission for Rural Communities. • Securing the provision and improvement of facilities; for the study, understanding and enjoyment of the natural environment. • Promoting access to the countryside, promotion of open spaces and encouraging open-air recreation, particularly healthy and active travel. Enforces the need to confer with local communities to include their vision and further needs for conservation, management, and enhancement of the natural environment. Also makes provision for the framework to contribute in other ways to social and economic well-being through management of the natural environment and by promoting visual and physical access to natural capital.	Natural Environment and Rural Communities Act 2006 C. 16 Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/2006/16/contents [Accessed October 21, 2021).
Public Services (Social Value) Act 2012	Requires people who commission public services to think about how they can secure wider social, economic, and environmental benefits. Is also a tool to help commissioners get more value for money out of procurement.	• Encourages commissioners to talk to local provider market or community to design better services. • Requires the Secretary of State and local authorities to publish strategies in connection with promoting social enterprise. • Enable communities to participate in the formulation and implementation of those strategies. • Requires public sector contracts for supply chains to include provisions relating to social outcomes and social value. Encourages ensuring public spending is focused on achieving value in sustainable development for local communities, including environmental, social, and financial wellbeing in public service contracts.	Public Services (Social Value) Act 2012 C.3 Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/2012/3/enacted [Accessed October 19, 2021]. Social Values Act: Information and Resources: Guidance supporting the Act. Available at: https://www.gov.uk/government/publications/social-value-act-information-and-resources/social-value-act-information-and-resources [Accessed October 19, 2021].
Sustainable Communities Act 2007	An opportunity for communities to identify legislative barriers that prevent them from improving the sustainability of their local areas and discuss them with local authorities.	• Aims to promote sustainable local communities and reverse the trend of community decline. • Local people can ask central government, via local authority to act where they consider this will help improve the environmental, social, or economic well-being of their area. The framework can embed the principles of the Act by encouraging diverse consultation with communities and partners on how sustainable, place-based value can best be embedded into communities.	Sustainable Communities Act 2007 C. 43s. Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/2007/23 [Accessed October 19, 2021]. Update Report on First Invitation Proposals 2013. Available at: UK Government (www.gov.uk) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/224540/Sustainable_Communities_Act_2007_update.pdf [Accessed October 19, 2021].
The Air Quality Standards (Amendment) Regulations 2016	These Regulations amend the Air Quality Standards Regulations 2010, which transpose for England Directive 2008/50/EC on ambient air quality etc. and Directive 2004/107/EC relating to arsenic etc. in ambient air.	• Regulations for the improvement of ambient (outdoor) air quality. • Contains limit values and target values for improving air quality. Sets thresholds for outdoor air quality, which should be reviewed along with the targets set in the Environment Act 2021. The framework should address air quality with partners to adopt aspects like natural capital, champion a low carbon and circular economy, adopt renewable energy and adopt community monitoring to improve air quality data (and bolster social value).	The Air Quality Standards (Amendment) Regulations 2016 (SI 2016/1184). Available at: UK Legislation (legislation.gov.uk) https://www.legisation.gov.uk/uksi/2016/1184/contents/made [Accessed February 10. 2022].

Legislation	Summary	Significance to the Sustainability Framework	Reference
The Clean Neighbourhoods and Environment Act 2005 ("the Act")	Provides local authorities with more effective powers to tackle poor environmental quality and anti-social behaviour.	• To make provision relating to litter and refuse. • To make provision relating to the transportation, collection, disposal, and management of waste. Can influence the Plan to reduce antisocial behaviour and create opportunities for social projects i.e. projects that increase sustainability awareness and education, create green jobs based on circular economies, reduce litter, and waste and create more inviting, safe, and attractive spaces.	The Clean Neighbourhoods and Environment Act 2005 C.16 Available at UK Legislation (legislation.gov.uk). https://www.legislation.gov.uk/ukpga/2005/16/contents [Accessed October 20, 2021].
The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	The 2019 regulations amend also aspects of the Wildlife and Countryside Act 1981 / Conservation of Offshore Marine Habitats and Species Regulations 2017 / Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001. The '2017' Regulations (now amended) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC), known as the Nature Directives. They also consolidated and updated the Conservation (Natural Habitats, &c.) Regulations 1994.	Regulations came into force on EU exit day and make provision for the Conservation of Habitats and Species. Includes legal protections for over 1000+ important, protected species and habitats (under the Habitats Directive). These include protections for European designed sites (formerly known as Natura 2000 sites, now known as the UK 'National Site Network' on land and at sea (e.g. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), including inshore and offshore marine areas). Powers to provide licencing for specific purposes and to protect wild animals. Adaptation of planning and other controls. Influences framework compliance – such as the need to adopt the Defra biodiversity mitigation hierarchy and Habitat Regulations Assessment, where appropriate. The legislation also influences opportunities in the framework to enhance, regenerate and/or create new habitat that can create linkages with protected areas or extend them e.g. through carbon offset, biodiversity and environmental net gain, green infrastructure, natural capital, nature regeneration, natural flood management, in accordance with professional industry standards.	The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Available at: UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukdsi/2019/9780111176573 [Accessed January 5, 2022].
The Environment Act 2021	The Act makes provision for targets, plans and policies that protect and improve the natural environment. Focuses on biodiversity retention, improvement, and covenants for conservation, as well as on waste, chemical and resource efficiency, air, and water quality and for the recall of products that fail to meet environmental standards.	• Sets out statutory targets for recovery of the natural world in four priority areas: air quality, biodiversity, water, resource efficiency and waste, and includes an important new target to reverse the decline in species abundance by the end of 2030. • 10% biodiversity net gain (BNG) mandated from 2023 (entering planning frameworks now) and Local Nature Recovery Strategies (LNRs) covering the whole of England is introduced under this Act. • Targets to halt species decline by 2030 and Local Authorities to produce biodiversity report every 5 years. • Legally binding long-term targets* for air and water to be set • Two new air quality targets by October 2022 (PM 2.5). • Legally binding environmental targets for waste to be set, alongside waste tracking and enforcement. • Enforcement notices for water companies, with fines up to 10% of annual turnover. • Charges to be brought in for single-use plastics. • Increased fines for illegal felling of trees. • Deposit schemes for drinks and recycling The framework will need to be compliant with relevant targets set in The Act, monitor emerging targets, and exhibit industry best practise in the four priority areas. *Note, a target is a "long-term" target if the specified date is no less than 15 years after the date on which the target is initially set.	Environment Act 2021 c.30. Available at: UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted [Accessed December 13, 2021].

Legislation	Summary	Significance to the Sustainability Framework	Reference
The Equality Act 2010 (containing the Public Sector Equality Duty - PSED)	Makes provision for reducing socio-economic inequalities, harmonising equality, and reducing harassment, victimisation and discrimination related to certain personal characteristics in law reform.	• Makes provision to reduce socio-economic inequalities, discrimination and disadvantage related to nine protected characteristics (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, and sexual orientation). • Enables certain employers to be required to publish information about the differences in pay between male and female employees. • Imposes duties in relation to public procurement functions, to increase equality of opportunity and emphasises education. • The Public Sector Equality Duty (PSED) is a statutory duty imposed on all UK public bodies by section 149 of the Equality Act 2010, to take equality considerations into account when exercising any of their functions and taking decisions. Mandates the sustainability framework and partners like Local Authorities to take account of the Equality Act 2010 (and the PSED) in the delivery of all flood defence schemes (throughout the life cycle – including planning, consultation, design, delivery, operation etc.).	Equality Act 2010 [and PSED - Section 149 of the Equality Act]. Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/2010/15/section/149 [Accessed January 10, 2022].
The Invasive Alien Species (Enforcement and Permitting) Order 2019	Makes provision for improving biosecurity by reducing harms for protected and other non-invasive nature species that would come under threat by invasive alien species.	• Sets out legislation for managing invasive alien species to uphold international (EU) obligations and act as a responsible partner with other nations to protect and sustain our native wildlife and forestry landscapes for future generations to enjoy. Consulted on in 2019. • 14 plant and animal alien invasive species are identified as being widely spread in England and Wales and requiring management. Builds upon the Wildlife and Countryside Act 1981 and European Communities Act 1972 (as enabling powers). Sets out the compliance that the sustainability framework will need to deliver for alien invasive species through the management and prevention of the spread of these species. Links to other sustainability measures such as ensuring enough grey water for boat or boot wash to prevent the spread of species.	The Invasive Alien Species (Enforcement and Permitting) Order 2019. Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/uksi/2019/527/contents/made [Accessed August 2022].
The Revised National Planning Policy Framework Updated 2021	The National Planning Policy Framework was revised on 20 July 2021 and sets out the government's planning policies for England and how these are expected to be applied. Replaces the previous National Planning Policy Framework published in March 2012, revised in July 2018, and updated in February 2019.	• Places greater emphasis on beauty, place-making, the environment, sustainable development and underlines the importance of local design codes. • Introduces measures to improve design quality and inclusion of trees in new developments. • Adjusts the presumption in favour of sustainable development for plan-makers. • The section on "planning and flood risk" confirms that plans should manage any residual flood risk by using opportunities provided by new development and "improvements in green and other infrastructure to reduce the causes and impacts of flooding (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management)". • The United Nations Sustainable Development Goals (UN SDGs) have been added. • The planning system has three overarching objectives, which are interdependent and need to be pursued in "mutually supportive ways so that opportunities can be taken to secure net gains across each of the different objectives (environmental, social and financial)". Influences the framework in respect of compliance with planning objectives for applicable development. Expects compliance with the overriding national objectives for development to deliver sustainable development, such as opportunities for net environment, social and financial net gains, place-making and landscaping, and natural flood management or green infrastructure to reduce the causes and impacts of flooding.	Ministry of Housing, Communities & Local Government. The National Planning Policy Framework 2021. Available at https://www.gov.uk/government/publications/national-planning-policy-framework--2#full-publication-update-history [Accessed January 10, 2022].

Legislation	Summary	Significance to the Sustainability Framework	Reference
The Waste (Circular Economy) (Amendment) Regulations 2020	Implements the UK's 2020 Circular Economy Package (CEP) Policy Statement, in England and Wales. Commits to moving towards a more circular economy, keeping resources in use for as long as possible, extracting maximum value from them, minimising waste, and promoting resource efficiency. Amends the following policies through the CEP 2020 (and transpose the European Commission's planned initiatives for a framework to make sustainable products, services, and business models the norm): • Environmental Protection Act 1990, Part 2 (waste on land) • End-of-Life Vehicles Regulations 2003 • Hazardous Waste (England and Wales) Regulations 2005 • Waste Electrical and Electronic Equipment Regulations 2013 • Environmental Permitting (England and Wales) Regulations 2016; and • Waste (England and Wales) Regulations 2011.	Most of the substantive changes under the 2020 CEP affect the Waste Framework Directive 2008 and the Landfill Directive 1999 as follows: • Prevent waste generation and monitor and assess the implementation of those measures - waste prevention and waste management programmes must be adopted. • Ensure separate collection of waste to ensure that waste is prepared for re-use, recycling, or other recovery operations. • Ensure that waste collected separately for re-use or recycling is not incinerated or landfilled (with listed exception, and only when in accordance with the waste hierarchy). • Requirement for hazardous waste that is mixed unlawfully to be separated where technically feasible. Amendments made to the Hazardous Waste Regulations 2005 for hazardous waste that was mixed lawfully. • Require undertakings to keep records of the quantity of materials and products resulting from the treatment of hazardous waste. Influences the sustainability framework to drive a circular economy approach that designs out 'waste,' promotes resource efficiency, monitors material toxicity, advocates renewable energy and resource, helps regenerate natural resource and keeps resources circulating at their highest value, for longer. This would create a new, green economy.	The Waste (Circular Economy) (Amendment) Regulations 2020. Available at UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/uksi/2020/904/contents/made [Accessed January 10, 2022].
UK Marine and Coastal Access Act 2009	UK and Welsh Assembly Governments gained new powers to protect marine wildlife and manage seas effectively. Including, creation of Marine Conservation Zones and a marine planning system. Also allows for improved management of inshore fisheries which will consider the needs of the marine environment (England and Wales).	• Makes provision in relation to marine functions, licensing, and activities, including enforcement powers. • New powers for nature conservation (Marine Conservation Zones and marine planning). • To make enforceable provisions about migratory and freshwater fish. • Agreements involving the MMO for the exercise of functions. • To make provision for, and in connection with, the establishment of a long-distance English coastal walking route and of rights of access to land near the English coast. Influences the sustainability framework to achieve compliance with marine protection. Enforces the need for engagement with the MMO, Harbour Authorities and relevant regulatory stakeholders. Provides a duty to manage seas effectively as well as protect them, and this may influence the framework to adopt the following: • Natural flood management that reduces coastal squeeze and works with natural processes. • Nature regeneration (including marine) e.g., via a natural capital and circular economy approach. • Environmental net gain (including biodiversity net gain - where undesignated habitat, local to impacts). • Blue/green Infrastructure – reduce pollutants. • Collaborate with regulatory bodies, advisors, and other river/estuarine stakeholders. • Rights of access requirements, including safe and inviting physical access to, and along the river when developing in intertidal zones.	UK Marine and Coastal Access Act 2009 C. 23. Available at: UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/2009/23/contents [Accessed October 21, 2021].

Legislation	Summary	Significance to the Sustainability Framework	Reference
Wildlife and Countryside (Amendment) Act 1991	Amends the Wildlife and Countryside Act 1981. Affords protection to birds, animals, and plants (including protection for wild and captive animals); and provides measures to prevent establishment of non-native, invasive species that are detrimental to wildlife (Part I). Amends the law relating to nature conservation, the countryside and National Parks and makes provision for the Countryside Commission to amend the law relating to public rights of way and for connected purposes (Part II and Part III). Miscellaneous provisions of the act (Part IV).	• One of the primary legislations for protecting animals, plants, and habitats in the UK. • Information on the legal protection afforded to wild birds in England, Wales and Scotland including nests and eggs; and other wild animals, including anti-poaching (Part I). • Protection of plants and rules on the introduction of new, non-native species, including invasive species (Part I). • Protection of captive birds (Part I). • Nature conservation, protection of the Countryside and National Parks (Part II). • Protection of Public Rights of Ways (PRoW). There is a duty to keep this under review (Part III). • Miscellaneous provisions of the act (Part IV). Influences the framework through duties to protect animals, plants, and habitats in the UK. May include designing for avoidance of biodiversity impacts, planning seasonal delivery programmes effectively. Influences the framework to contribute to nature conservation by providing enhancement of the countryside, national parks, recreation areas and public rights of way that create environmental, social, and financial value.	Wildlife and Countryside (Amendment) Act 1991. Available at UK legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/1991/39/contents [Accessed February 10, 2022]. (Original) Wildlife and Countryside Act 1981 (c.69). Available at: UK Legislation (legislation.gov.uk) https://www.legislation.gov.uk/ukpga/1981/69 [Accessed January 5, 2022].

Table 4. Relevant government commitments to sustainability

Government commitments	Summary	Significance to the Sustainability Framework	Reference
Agenda 2030	Sets out how the Government aims to deliver the UN Sustainable Development Goals (UN SDGs) also known as Global Goals by 2030. The purpose is to benefit national and international spheres. Agenda 2030 explains the government's ambitious plan for all 17 UN SDGs.	• Creating sustainable cities and communities by tackling air pollution is a priority - agreed legally binding UK targets to reduce emissions of key air pollutants by 2020 and 2030. • Responsible consumption and production - a pledge to reduce waste in the UK and ensure the sustainable management and efficient use of the UK's natural resources. • Climate action - investing in low-carbon energy sources, improving fuel standards in cars, and increasing energy efficiency wherever possible. • Life on land - promoting effective use of natural resources and the environment through development programmes; promoting conservation and sustainable management of UK habitats. Protecting important sites, such as Sites of Special Scientific Interest and Areas of Outstanding Natural Beauty. Can influence the framework by setting out how the UN Sustainable Development Goals can be delivered. The framework should consider goals and recommendations to: • Recover and improve life on land and in water ~ via nature regeneration, natural capital, environment net gain, green infrastructure, sustainable drainage, biodiversity net gain and carbon offsetting etc. • Support net zero and climate action ~ via implementation of a low-carbon, circular economy approach to design out waste, use resources sustainably and work with renewable energy and sustainable procurement partners. • Integrate climate change adaptation and resilience measures into all levels of flood risk management activity. • Improve air, land, and water quality ~ via careful and holistic planning, design, and implementation.	Department for International Development. "Agenda 2030". Available at: https://www.gov.uk/government/publications/agenda-2030-delivering-the-global-goals [Accessed October 28, 2021].
Circular Economy Package (CEP) Policy Statement (2020)	Commits to keeping resources in use for as long as possible, extracting maximum value from them, minimising waste, and promoting resource efficiency. The CEP introduces a revised legislative framework, identifying steps for the reduction of waste and establishing an ambitious and	• The CEP plans for long-term action on environmental issues that are essential for a sustainable future. • Aims to optimise the use of resources within the economy by increasing the duration of a product's useful life and ensuring when a product has reached the end of its life its resources can be productively used repeatedly, creating further value. • It transposes the European Commission's planned initiatives for a framework to make sustainable products, services, and business models the norm. • Many of the themes and provisions within the CEP relate to areas of the Resources and Waste Strategy (RWS) for England, forming part of the UK government's 25 Year Environment Plan.	HM Government, 'Circular Economy Package policy statement' Available at: https://www.gov.uk/government/publications/circular-economy-package-policy-statement [Accessed October 22, 2021].

Government commitments	Summary	Significance to the Sustainability Framework	Reference
	credible long-term path for waste management and recycling.	Can influence the framework in terms of implementing a circular economy approach to reduce waste and optimise use of natural resources, keeping them at their highest value, for longer. The circular economy is underpinned by nature regeneration and renewable energy and supports recycling and waste management across all manufacture, production, and industry streams.	Ellen MacArthur Foundation – 'The Butterfly Diagram'. Available at: https://ellenmacarthurfoundation.org/circular-economy-diagram [Accessed December 2021].
City of London (CoL) Riverside Strategy (2021)	The City Corporation is dedicated to shaping an outstanding riverside environment, protecting, and supporting a flourishing society and a thriving economy fit for the coming century. In its role as Lead Local Flood Authority, the City Corporation will progress this vision through a strategy that uses the opportunities brought about by the need to raise our river flood defences to overcome challenges and ensure benefits to the people who live, work, learn and visit the Square Mile.	The following are the long-term goals of the strategy. Balancing these will be key to its success: • To ensure continued flood protection to the end of the century and beyond by raising the defences and improving future maintenance. • To maintain and improve pedestrian access along the entire length of the riverside. • To increase the value of the riverside for natural capital and ecology. • To protect and enhance our historic riverside assets. • To promote the safe use of the river and riverside as a vibrant place to be for health and wellbeing. • To safeguard protected and valued views. • To maintain appropriate land use adjacent to the river. Influences the framework to deliver against the above features, in combination with our partners and support key themes, such as addressing the climate emergency and carbon management, supporting nature and landscape recovery, creating sustainable and vibrant green growth, and preserving and enhancing our socio-cultural heritage and assets.	City of London (CoL) Riverside Strategy (2021). Available at: https://www.cityoflondon.gov.uk/assets/Services-Environment/city-of-london-riverside-strategy.pdf [Accessed December 2021].
City of London (CoL) Riverside Walk Enhancement Strategy (2014)	The strategy identifies current issues and pressures for change, including the Thames Path, and sets out a framework for addressing them within the context of existing policies and guidance, based on clear evidence of need and the requirements for sustainable growth.	The objectives of the Riverside Walk Enhancement Strategy align with, and develop, the core strategy strategic objectives. The key objectives are as follows: • The establishment of a fully accessible walkway which provides a direct route along the riverside with enhanced connections to the rest of the city. • The creation of new and the redesign of existing green spaces for people to stop and enjoy the Thames, as well as to encourage the biodiversity, enhance the cultural heritage of the city riverside, and mitigate flood risk. • The improvement of the cohesion and vibrancy of the riverside by encouraging new developments to provide a spacious, accessible, and better-connected riverside walk with appropriate active frontages. This strategy can influence the framework to include strong social infrastructure designs that build in accessibility and connectivity and enhance social integration, as well as encourage biodiversity, cultural heritage, and natural capital.	City of London (CoL) Riverside Walk Enhancement Strategy (2014). Available at: https://democracy.cityoflondon.gov.uk/documents/s43377/Riverside%20Walk%20Enhancement%20Strategy.pdf [Accessed December 14, 2021].
Clean Growth Strategy (2017)	This strategy sets out proposals for decarbonising all sectors of the UK economy through the 2020s. It explains how the whole country can benefit from low carbon opportunities, while meeting national and international commitments to tackle climate change.	• Growing national income while cutting greenhouse gas emissions. • Achieving clean growth, while ensuring an affordable energy supply for businesses and consumers, is at the heart of the UK's Industrial Strategy. • Increase productivity. • Create good jobs, boost earning power for people across the country. • Help protect the climate and environment and enhance the benefits and value of our natural resources for future generations. This strategy can influence the framework to consider ways of working with partners to integrate renewables into flood defence delivery for both fixed and active assets. The strategy can also enhance the benefits and value of natural resources through the protection and recovery of natural assets and nature; and encourage effective carbon management through the whole carbon lifecycle, including through a circular economy that creates green growth in employment.	HM Government, 'Clean Growth Strategy 2017' Available at: https://www.gov.uk/government/publications/clean-growth-strategy [Accessed October 22, 2021].

Government commitments	Summary	Significance to the Sustainability Framework	Reference
Coastal Communities Fund (CCF) (2018)	Introduced as a UK-wide programme created and funded by the UK Government with the aim of encouraging the economic development of UK coastal communities by awarding funding to create sustainable economic growth and jobs.	• Projects should, where possible, encourage local people to secure employment opportunities resulting from the project. • The fund will allow eligible training and skills development budgets within the project cost. • The government is helping coastal communities flourish and strengthen their appeal as places to live, work and visit. This fund could influence the framework to consider wider social benefits such as training and employment schemes and influence the framework to work with communities to add social value and 'create a sense of place'. The fund will allow eligible training and skills development budgets within the project cost. The government is helping coastal communities flourish and strengthen their appeal as places to live, work and visit. This fund could influence the framework to consider wider social benefits such as training and employment schemes and influence the framework to work with communities to add social value and 'create a sense of place'.	Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government. "Coastal Communities Fund" (2018). Available at: https://www.gov.uk/government/collections/coastal-communities [Accessed October 22, 2021].
Companies House Corporate Social Responsibility Strategy (CSR) Strategy (2018)	As a government organisation, Companies House has a CSR commitment to ethical and sustainable business practices. This means they take account of their social, economic, and environmental impact. CSR is good for the planet, our employees, customers, and communities.	Reducing direct impact on: • The environment ~ by actively managing their waste, emissions, and consumption of natural resources. • People ~ by creating a workplace that encourages diversity and equal opportunities for all. • Procurement ~ suppliers have been tendered, audited, and checked against important sustainability criteria. Building a culture that promotes employee volunteering, skills matching and fundraising ~ actively supporting local businesses and the communities in which we operate. This strategy can influence all parties delivering the framework to implement CSR. CSR through the framework should address social, environmental, and economic issues. This may include partnering to protect and improve the natural environment and natural resource or working to reduce greenhouse gas emissions to net zero (through carbon management and a low-carbon circular economy) or achieving social value benefits by working with community needs.	Companies House. "Our commitment to Corporate Social Responsibility" (2018). Available at: https://www.gov.uk/government/news/our-commitment-to-corporate-social-responsibility-csr (2018) [Accessed October 28, 2021].
Energy Security Strategy (2022)	The Prime Minsters Energy Security Strategy sets out bold commitments to achieving a major acceleration of home-grown power with a greater focus on renewable energy sources.	• Boosts Britain's energy security following rising global energy prices and volatility in international markets. • Bold new commitments to supercharge clean energy and accelerate deployment, which could see 95% of Great Britain's electricity set to be low carbon by 2030. • Ambitious, quicker expansion of nuclear, wind, solar, hydrogen, whilst supporting the production of domestic oil and gas in the nearer term, including delivering the equivalent to one nuclear reactor a year instead of one a decade. • Over 40,000 more jobs in clean industries to be supported thanks to measures, totalling 480,000 jobs by 2030. Useful to the framework in terms of working with partners to seek out renewable energy opportunities, through the implementation of a circular economy and carbon reduction strategy. The strategy places a greater focus on renewables – of which there are notably community schemes along the Thames Estuary, with potential opportunities to align over the course of the Plan.	The Prime Minister. "Energy Security Strategy. Press Release: Major acceleration of homegrown power in Britain's plan for greater energy independence. Available at: https://www.gov.uk/government/news/major-acceleration-of-homegrown-power-in-britains-plan-for-greater-energy-independence
Environment Land Management Schemes (ELMs)	Defra's ELMs are part of the UK government's future farming policy, which seeks to move towards farm support centred on "public money for public goods" such as environment and sustainability improvements and animal welfare improvements. ELMs contain three elements: • The Sustainable Farming Incentive (SFI) • Local Nature Recovery • Landscape Recovery	There are three new schemes that will reward environmental land management, piloting in 2022 and released in 2024: • Sustainable Farming Incentive (payments for sustainable farming) • Local Nature Recovery • Landscape Recovery Delivers to the Agriculture Act 2020 and links with the impending Soil Carbon Code. These schemes are intended to support the rural economy while achieving the goals of the 25 Year Environment Plan and a commitment to net zero emissions by 2050. Through these schemes, farmers and other land managers may enter into agreements to be paid for delivering the following:	Department for Environment, Food and Rural Affairs. "Environment Land Management Scheme (ELMs)". Available at: https://www.gov.uk/government/publications/environmental-land-management-schemes-overview/environmental-land-management-scheme-overview [Accessed January 2022].

Government commitments	Summary	Significance to the Sustainability Framework	Reference
		• Clean and plentiful water • Clean air • Thriving plants and wildlife • Protection from environmental hazards • Reduction of, and adaptation to, climate change • Beauty, heritage, and engagement with the environment Relevant to the sustainability framework in respect of working with partners on nature recovery, net zero, a circular economy and climate resilience, namely through the recovery and regeneration of landscapes, soils, and biodiversity, which also act as natural sinks and considering if there are ways to achieve social benefits through these eco-system services.	
UK Government 25 Year Environment Plan (2018)	Sets out a plan for the next 25 years as to how the UK government will help improve the environment and sustain it over the next generation through a number of key measures, targets, and requirements.	• Use and manage land more sustainably • Recover nature and enhance the beauty of landscapes (including historic landscapes) • Connect people with the environment to improve health and wellbeing • Increase resource efficiency and reduce pollution and waste • Secure clean, healthy, productive, and biologically diverse seas and oceans • Protect and improve our global environment • Mitigating and adapting to climate change • The 25 Year Environment Plan committed the government to exploring wider environmental net gain These key features can influence the framework to address the climate and nature emergencies by prioritising the recovery and enhancement of landscapes, habitats and biodiversity and bolstering natural capital (including air, land, water quality), reducing carbon and waste and optimising the efficient use of natural resources through a circular economy. The Plan also influences the framework to focus on climate mitigation and adaptation and to ensure that the key themes prioritise social and economic wellbeing, such as by creating green jobs and developing a 'sense of place' that is informed by local communities.	HM Government and Department for Environment, Food & Rural Affairs "A Green Future: Our 25 Year Plan to Improve the Environment" (2018). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/2-year-environment-plan.pdf [Accessed October 22, 2021].
Greening Government Commitments (2021-2025)	The Greening Government Commitments (GGCs) set out the actions UK government departments and their partner organisations will take to reduce their impacts on the environment in the period 2021 to 2025. The commitments apply to the office and non-office estate of central government departments and their Executive Agencies, Non-Ministerial Departments and executive Non-Departmental Public Bodies, unless specifically exempted.	• Mitigating climate change: working towards net zero by 2050 • Minimising waste and promoting resource efficiency • Reducing our water use • Increase procurement of sustainable products and services • Nature recovery: making space for thriving plants and wildlife (including developing and delivering nature recovery plans) • Adapting to climate change: develop and deliver climate change adaptation strategies. • Reducing environmental impacts from Information Communication Technology (ICT) and digital services. The commitments are relevant to the framework because they influence the reduction of carbon emissions, minimising waste and improving resource efficiency, as well as increasing procurement of sustainable products and services, through a circular economy. The commitments also advocate the regeneration and recovery of nature and promote resilience and adaptation to address the climate emergency. The use of ICT and digital services influences most, if not all, of our key themes within the sustainability framework e.g. flood prediction data, heat sensor data etc. Each commitment can contribute either directly (or indirectly) to delivering social value.	Department for Environment, Food and Rural Affairs. Cabinet Office. "Greening Government Commitments 2021-2025". Available at: https://www.gov.uk/government/publications/greening-government-commitments-2021-to-2025/greening-government-commitments-2021-to-2025 [Accessed January 20, 2022].

Government commitments	Summary	Significance to the Sustainability Framework	Reference
Inclusive London: The Mayor's Equality, Diversity, and Inclusion Strategy (2018)	The Mayor's Equality, Diversity and Inclusion Strategy sets out how he will work to create a fairer, more equal, integrated city where all people feel welcome and able to fulfil their potential.	The strategy has six parts to achieving equality diversity and inclusion: • A great place to live • A great place for young people • A great place to work and do business • Getting around • A safe, healthy, and enjoyable city • Leading by example The strategy will be important for informing social inclusions within the sustainability framework, such as designing for protected characteristics, 'creating a sense of place' and bolstering natural capital that allows all communities to have access to green space, healthy recreation and other opportunities that improve health and wellbeing, such as access to green jobs and diverse supply chains.	The Mayor of London. "Inclusive London: Equality, Diversity and Inclusion" (2018). Available at: https://www.london.gov.uk/sites/default/files/mayors-equality-diversity-inclusion-strategy-easy-read.pdf [Accessed January 5, 2022].
Intergovernmental Panel on Climate Change: IPCC (Reports from 2021 & 2022)	The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. It produces special reports on topics agreed by its member governments.	The IPCC prepares comprehensive Assessment Reports (AR) about the state of scientific, technical, and socio-economic knowledge on climate change, its impacts and future risks, and options for reducing the rate at which climate change is taking place. It also produces Special Reports on topics agreed to by its member governments, as well as Methodology Reports that provide guidelines for the preparation of greenhouse gas inventories. The IPCC is working on the Sixth Assessment Report, which consists of three Working Group contributions and a Synthesis Report . The reports include: • AR6 Synthesis Report: Climate Change 2022 • AR6 Climate Change 2022: Impacts, Adaptation and Vulnerability • AR6 Climate Change 2022: Mitigation of Climate Change • AR6 Climate Change 2021: The Physical Science Basis The Synthesis Report is the last report, and will use non-technical language for policy makers and will be split into three distinct sections by way of summary, drawing on the impetus required for mitigation of climate impacts, adaptation to impacts and reducing community vulnerability. It will also summarise the progress made, the present and predicted state of play, and the climate thresholds/tipping points that are either now critical, or breached. This structure, substantially different to what was adopted for AR5 SYR, enables a holistic framing that integrates across the Working Groups, better enabling the SYR to cover different aspects of climate change. The reports are critical for understanding the physical science basis behind the climate emergency, the impetus for mitigation and adaptation to impacts and the need for reducing whole community vulnerability (globally), now that several thresholds / tipping points are threatened, or have been breached. The latest report, AR6 Synthesis Report, will be the last report and will be written in a non-technical manner so that policy makers can understand it easily. The first section, 'Current Status and Trends', covers the historical and present period. The second section, 'Long-term Climate and Development Futures', addresses projected futures up to 2100 and beyond. The final section is 'Near-term Responses in a Changing Climate', considers current international policy timeframes, and the time interval between now and 2030-2040.	The IPCC Reports (2021-2022 range). Available at: https://www.ipcc.ch [Accessed November 2021]
Litter Strategy for England (2017)	The first ever Litter Strategy for England in April 2017 set out 36 commitments and actions to deliver a substantial reduction in litter and littering within a generation.	• Regulating for the new powers and penalties for councils. • The launch of the Litter Innovation Fund. • The development of a new approach to measuring litter. This strategy could influence the framework to create cleaner spaces for projects that deliver other social value or involve the local community; and address waste and resource management when working in partnership.	Department for Environment, Food & Rural Affairs, Department for Transport, Ministry of Housing, Communities & Local Government "Litter Strategy for England (2017). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/630999/litter-strategy-for-england-2017-v2.pdf [Accessed March 10, 2021]

Government commitments	Summary	Significance to the Sustainability Framework	Reference
Local factors in managing flood and coastal erosion risk and property flood resilience: A summary of the responses to each question in the call for evidence (2021)	Long-term plan to create a nation more resilient to future flood and coastal erosion risk in its Flood and Coastal Erosion Risk Management Policy Statement. This plan sets out five key commitments – supported by over 40 actions – to accelerate progress to better protect and better prepare the country for the years to come. The summary of responses to consultation on the plan is contained in this document, along with the queries raised.	• Strengthening the assessment of local circumstances in the government's flood and coastal defence programme. • Exploring whether any specific changes should be made to reflect local circumstances – such as communities that have been frequently flooded in the past, communities that are more economically vulnerable, for smaller communities and/or for communities in need of greater property-level measures to resist flood water. This plan is relevant to the Sustainability Framework because it has an aim to create a nation more resilient to future flood and coastal erosion risk – with an increased focus on local resilience. This could influence the framework to address place-based adaptation and resilience needs through strategic adaptation planning and design. It could also influence the framework to bolster local mitigation, adaptation, and resilience via environmental net gain and/or resilient technology that could assist communities in need of accessing real-time or predictive data, or by sharing local resilience strategies, case studies and plans across council boundaries.	Department for Environment, Food and Rural Affairs. "Local factors in managing flood and coastal erosion risk and property flood resilience: Summary of Consultation Responses" (2021) Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1006911/flood-coastal-erosion-call-for-evidence-summary-of-responses.pdf [Accessed October 25, 2021].
London City Resilience Strategy (2020)	This strategy by the Greater London Authority (GLA) focuses specifically on the long-term resilience challenges facing London from now to 2050. This strategy is a starting point for developing long-term holistic resilience for London, bringing together different policy areas to deliver cross-cutting benefits. This strategy aspires to make resilience central to policy making in London.	• Looks at a range of potential future hazards and look at opportunities and actions required to build resilience for the capital, including through collaboration, data, technology as well as through resilient and low-carbon infrastructure, and becoming more sustainable, cleaner, and greener. • Inclusive, based on broad consultation with stakeholders. • Adaptive and willing to adopt alternative options in changing circumstances. • Resourceful and considers ways to use resources to achieve goals. • Linked to a global network of resilient cities, where examples can be shared. This strategy can influence the framework by collaborating with partners on bolstering resilience to the climate emergency, such as by talking to communities to develop commitments that provide cultural and social value and by delivering resilient and low-carbon infrastructure. Additionally, the strategy can influence the framework to recover green spaces, soils, and nature, as well as adopt green/blue infrastructure and sustainable drainage. The strategy promotes the use of adaptation, and the conservation of water. The use of monitoring / predictive data, case studies and technology will also be vital to the framework.	Mayor of London. "London Resilience Strategy" (2020). Available at: https://www.london.gov.uk/sites/default/files/london_city_resilience_strategy_2020_digital_0.pdf [Accessed October 26, 2021].
London Environment Strategy (2018)	The mayor is taking a range of actions to improve the environment now, setting London on the path to create a better future. This is the first strategy to bring together approaches to every aspect of London's environment.	This is the first strategy to bring together approaches to every aspect of London's environment, integrating the following areas: • Air quality • Green infrastructure • Climate change mitigation and energy • Waste • Adapting to climate change • Ambient noise • Low carbon circular economy • Making green spaces more accessible, especially for those that have the least access. • Protecting London against flooding. This environmental strategy has a few parallels with the sustainability framework and can influence the framework to work with partners to deliver integrative, mutually beneficial benefits in the above areas. Additionally, the framework will consider working with partners to deliver wider 'social' value and equity benefits through socially conscious flood defence development designs, improved / safe / clean / inviting access to and along the river, diverse cultural and green spaces for social integration and inclusion, and access to opportunities for all.	London Assembly. "London Environment Strategy". Available at: https://www.london.gov.uk/what-we-do/environment/london-environment-strategy [Accessed October 26, 2021]. Progress reports are available under this link to cover the period from May 2016 to May 2021, with particular focus on achievements since the first progress report.

Government commitments	Summary	Significance to the Sustainability Framework	Reference
London Sustainable Development Commission (LSDC): Social Value in Regeneration (2021)	This strategy aims to incorporate communities into the regeneration process. The London Sustainable Development Commission (LSDC) believes that placing social value at the heart of regeneration and place making unlocks new ways of working which will deliver great places that serve the people who live in them.	• Improve green spaces for communities, the ones that lack access have been linked to higher vulnerability to a range of respiratory and associated conditions, including COVID-19. • Sets out how social value can be created by regeneration and place making. These features can influence the framework to consider increasing, enhancing, and conserving green spaces in areas where communities lack them and/or by vulnerable demographics such as health and age. Public Health England studies have shown the most deprived communities are usually the furthest from green space. The framework will also include thoughts on how social value can be incorporated into the framework, by working with communities to create a sense of place, and bolster sustainable regeneration that works for all.	London Sustainability Commission. “Social Value in Regeneration: Consultation Document for Designers” (2021). Available at: https://www.london.gov.uk/sites/default/files/lsdc_social_value_in_regeneration_-_consultation_document_-_designers_0.pdf [Accessed October 26, 2021].
Marine Planning and UK Marine Plans (2014)	A new approach to managing the seas around England from the Marine Management Organisation (MMO). It encourages local communities to be involved in planning, make the most of growth and job opportunities, reduce impacts on the natural environment and enables sustainable development in the marine area.	• Encourage local communities to be involved in planning. • Enable sustainable development in the marine area and integrate with planning on land. • Encourage developments that consider wildlife and the natural environment and plan to avoid impacts. • Sustainable use of marine resources. Marine planning could influence the framework to consider a collaborative approach with local communities and encourage partnership working to achieve natural capital enhancements, nature regeneration, carbon offsetting, environmental and marine net gain (under consultation). The framework could also advocate the sustainable use of marine resources through a circular economy.	Marine Management Organisation (MMO). “Marine Planning” (2014). Available at: https://www.gov.uk/topic/planning-development/marine-planning [Accessed October 22, 2021].
National Adaptation Programme 2018 - 2023 (2018)	The second NAP sets out the actions the government is, and will be, taking to address the risks and opportunities associated with climate change over the next 5 years. Risks include: • Flooding and coastal change risks to communities, businesses, and infrastructure • Risks of shortages in the public water supply for agriculture, energy generation and industry • Risks to natural capital including terrestrial, coastal, marine, and freshwater ecosystems, soils, and biodiversity • New and emerging pests and diseases and invasive non-native species affecting people, plants, and animals.	• Working with key infrastructure sectors on a wide range of climate risks, and greater integration of climate in the health and planning systems. • Access for all to information about risk to their lives, livelihoods, health, and prosperity posed by hazards, including flooding and coastal erosion. • Bringing the public, private and third sectors together to work with communities and individuals to reduce the risk of harm – particularly those in vulnerable areas. • Making sure that decisions on land use, including development, reflect the level of current and future flood risk and that this flood alleviation contributes to a low-carbon economy. • Boosting the long-term resilience of homes, businesses, and infrastructure and taking action to reduce the risk of harm from flooding and coastal erosion. • Bolstering resilience through the natural environment via the incorporation of natural capital, biodiversity, and soil recovery and that these also bolster health and wellbeing. • Promoting the development of a healthy, equitable and resilient population, which are able to adapt to a changing climate. • The government’s £2.6 billion six-year capital investment programme to reduce flood and coastal erosion risk will provide over £30 billion in economic benefits Influences the sustainability framework to consider a range of risks from hazards and potential ways to address the climate and nature emergencies across key sustainability themes, in order to predict, prevent and mitigate impacts; and enable communities to adapt and recover from effects (achieve resilience).	Department for Environment, Food and Rural Affairs. “The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting” (2018). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/727252/national-adaptation-programme-2018.pdf [Accessed October 26, 2021].
Nature Recovery Network (NRN) (2022)	The Nature Recovery Network (NRN) is a national network of wildlife-rich places. The aim is to expand, improve and connect these places across our cities, towns, countryside, and coast. The NRN is a major commitment in the government’s 25 Year Environment Plan and enacted by the Environment Act 2021.	The Nature Recovery Network (NRN) will help us deal with three of the biggest challenges we face: biodiversity loss, climate change and wellbeing. Establishing the NRN will: Enhance sites designated for nature conservation and other wildlife-rich places - newly created and restored wildlife-rich habitats, corridors and stepping-stones will help wildlife populations to grow and move. Improve the landscape’s resilience to climate change, providing natural solutions to reduce carbon and manage flood risk, and sustaining vital ecosystems such as improved soil, clean water, and clean air. Reinforce the natural, geological, and cultural diversity of our landscapes, and protect our historic natural environment. Enable us to enjoy and connect with nature where we live, work and play - benefiting health and wellbeing	Department for Environment, Food and Rural Affairs. The Nature Recovery Network (NRN) 2022. Available at https://www.gov.uk/government/publications/nature-recovery-network/nature-recovery-network [Accessed January 20, 2022].

Government commitments	Summary	Significance to the Sustainability Framework	Reference
		NRN objectives, by 2042 they will: Restore 75% of protected sites on land (including freshwaters) to favourable condition so nature can thrive. Create or restore 500,000 hectares of additional wildlife-rich habitat outside of protected sites. Recover threatened and iconic animal and plant species by providing more, diverse, and better-connected habitats. Support work to increase woodland cover. Achieve a range of environmental, economic, and social benefits, such as carbon capture, flood management, clean water, pollination, and recreation. The NRN can heavily influence the sustainability framework by establishing the need for a critical nature recovery theme that helps to address the nature (and climate) emergencies (and address air/water/land quality), as well as improve social and economic benefits and bolster resilience for communities facing the impacts of climate change.	
Net Zero Strategy (build back greener)	This strategy sets out policies and proposals for decarbonising all sectors of the UK economy to meet our net zero target by 2050.	• Levelling up the country, ending our domestic contribution to climate change, and leading the world to a greener, more sustainable future. • Reducing emissions across the economy e.g. in the power sector, in the fuel supply and hydrogen sector, in industry (e.g. manufacturing and refining), across heat and buildings, transport, natural resources, waste and fluorinated gases, as well as touching on greenhouse gas removals. • Supports embedding net zero in government and supporting innovation and action in net zero across all sectors. • Supporting transition across the economy – including through green investment, green jobs, skills, and industries, embedding net zero in government, local climate action, empowering the public and business to make green choices and international leadership and collaboration. This strategy influences the framework to provide an equitable transition to net zero, such as through sharing innovation and case studies for whole-life carbon management across the estuary. Or, by developing a low-carbon, circular economy, with the potential to bolster renewable energy and green jobs. The framework can also add social value that is equitable, by creating fair access for all, to education, training, and skills.	HM Government, “Net Zero Strategy – Build Back Greener”. (2021). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1028157/net-zero-strategy.pdf [Accessed October 27, 2021].
Our Waste, Our Resources: A Strategy for England (2018)	This strategy sets out how the UK government will minimise waste, promote resource efficiency and move towards a circular economy.	• Sustainable production • Helping consumers take more considered actions – support the market for remanufactured and sustainable goods and procurement • Resource’s recovery and management • encourage innovative waste treatment technologies that create transport fuels through the Renewable Transport Fuels Obligation (RTFO) • Research and innovation • Monitoring progress: data management and evaluation • Global Britain: international leadership – establish cross-government oversight of the strategy and national resource security This strategy can influence the framework by promoting resource efficiency, sustainable production and supporting the market for remanufactured and sustainable goods. This could be achieved by working with partners to implement a low-carbon, circular economy that is underpinned by renewable energy and nature recovery. The framework could use innovation, monitoring and data management to inform its implementation and progress.	Department for Environment, Food and Rural Affairs. “Resources and Waste Strategy at a Glance”. Available at: https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england/resources-and-waste-strategy-at-a-glance [Accessed October 27, 2021].

Government commitments	Summary	Significance to the Sustainability Framework	Reference
Public Health England Sustainable Development Management Plan 2020-2025	Public Health England is committed to sustainable development in all its activities it undertakes. Their Sustainable Development Management Plan sets out the organisation's aims to help it to operate in more sustainable ways that meet its objectives and targets. Recognises the import of considering social, economic, and environmental impacts in decision making.	This plan combines key areas of action from a range of other sustainable development polices, strategies and plans, such as ways to implement: • The United Nations Sustainable Development Goals (UN SDGs) • Energy and carbon management (including across travel and transport and the built environment) • Sustainable use of waste and water • Sustainable consumption, production, and procurement • Adaptation to climate change • Natural resource protection and environmental enhancement • Sustainable communities and health and wellbeing • Public Health England's ambition on sustainability and climate change also extends to the work the organisation undertakes externally, in the public and private sectors, though not covered in detail in this document The framework has synergies with the themes being explored for the sustainability framework and can influence features in the framework in the areas of carbon management, nature recovery, a circular economy, adaptation to the climate emergency and social outcomes.	Public Health England. "Sustainable Development Management Plan" 2020-2025. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907192/PHE_SDMP_2020_25-2.pdf [Accessed December 19, 2021].
Thames Estuary 2050 Growth Commission report (2018)	The Thames Estuary 2050 Growth Commission was established in March 2016 to develop an ambitious vision and delivery plan for north Kent, south Essex, and east London. The 2050 Vision sets out the key challenges and opportunities of the area, alongside future trends. It then presents a vision for the Thames Estuary and resulting recommendations and priorities which will be central to its delivery. It concludes with a focus on the governance reforms and delivery models needed to realise the Commission's aspirations.	Analysis of 'challenges' in the Thames Estuary area which include: • Scale of the area • Delivering homes • Stimulating economic growth • Limited mobility in some areas, particularly outside of London • Low skills and education levels • Environmental constraints • Fragmented governance • Pockets of deprivation The plan is forward-looking and looks at the potential future of addressing these challenges in the Thames Estuary area e.g. The Commission believes that the area has opportunity to strengthen the existing sector, whilst diversifying the sectoral mix. The main vision is to transform the Thames Estuary area "from an underperforming river region to a tapestry of 'productive places' along a global river." Some main objectives include: • Creating adaptable places • Building economically thriving places • Providing scale and pace • Prioritise infrastructure investment • Utilise higher education institutions • Integrate environmental assets and benefits The framework could consider some of these key elements from the vision. For example, considering what environmental constraints may face the Thames Estuary 2100 Plan and importantly, determining how the plan can create opportunities for achieving sustainability benefits (environmental, economic, and social). The vision specifically mentions the Thames Estuary 2100 Plan.	Ministry of Housing, Communities & Local Government. Thames Estuary 2050 Growth Commission, 2018. Available at: https://www.gov.uk/government/publications/thames-estuary-2050-growth-commission-report [Accessed December 20, 2021]

Government commitments	Summary	Significance to the Sustainability Framework	Reference
Thames Estuary Growth Board: Levelling Up Data Atlas (2021)	Understanding inequalities across the Thames Estuary's communities. Commissioned by the Thames Estuary Growth Board, May 2021.	• The Thames Estuary Growth Board recognises the need for future growth to be inclusive in its approach, and for investment to be targeted at creating jobs and enhancing prosperity in the parts of the estuary that need it most. • The Growth Board commissioned research to define what levelling up means for the Thames Estuary and where the region and its places stand now. The research presented in the data atlas will inform the refreshed Thames Estuary Growth Board strategy, activities and investments going forward so growth benefits reach across our communities. Important spatial, quantitative, and qualitative data document showing inequalities across the Thames Estuary with potential areas of resolve, which could help inform the social outcomes within the sustainability framework.	Thames Estuary Growth Board. "Thames Estuary Levelling Up Data Atlas". Available at: https://thamesestuary.org.uk/wp-content/uploads/2021/01/Thames-Estuary-Levelling-Up-Data-Atlas.pdf [Accessed December 14, 2021].
Thames Estuary Growth Board: The Green Blue Action Plan 2020 (Our Vision)	Supports and advocates key sustainability developments – using the river for freight and passenger transport, improving green spaces and natural capital, spearheading decarbonisation technologies and supporting creative art programmes. The Growth Board is about people and action, bringing together the right people with the right skills, combining opportunity, motivation, and connections.	• Improving and increasing use of the river to carry freight of all types • Amplify use of the river for passenger transport • Backing significant infrastructure projects that will boost economic growth • Supports initiatives for the greening of transport and energy across the estuary • Improved access to green spaces and the riverside, a coordinated approach to green space in the estuary • The development of an action plan in response to government commissioned natural capital study – and places to support the visitor economy • Working with higher education institutions and others, to support innovation and research and development, in particular sustainable energy and life sciences • Supporting initiatives to help businesses develop skills • Help the Thames Estuary become a hub for cultural and creative programmes that add social value Can encourage the framework to improve and maintain the Thames Estuary's green spaces and natural capital, work with partners to support green growth and green-up transport and energy. The framework could also improve accessibility, and champion socio-economic growth.	Thames Estuary. "The Green Blue Action Plan (Our Vision)". Available at: https://thamesestuary.org.uk/wp-content/uploads/2020/07/TE_Action_Plan101.pdf [Accessed October 28, 2021].
The Glasgow Climate Pact (2021)	Adopted at the COP26 UN climate conference in November 2021. Signatory countries increased climate ambition and action from the Paris Agreement in 2015 and set out new rules to reduce greenhouse gas emissions including phasing down coal and establishing a global carbon market. The Glasgow Climate Pact keeps critical 1.5C global warming goal alive.	• The first global agreement to explicitly include parties pledging to reduce the use of fossil fuels • China and India opted to "phase down" coal instead of "phasing out", a stance which all 197 countries eventually agreed upon • Under the Glasgow Climate Pact, countries have agreed to improve, "revisit and strengthen" their 2030 national climate targets by the end 2022, shortening the review to two years instead of another five years as originally set out in the Paris Agreement • Providing "loss and damage" funds, meaning compensation for the climate damages in developing countries caused by historical emitters and rich countries, was also mentioned for the first time • Under the Glasgow Pact, countries have agreed to start a "dialogue" about funding a new organisation, providing "technical assistance" to help avoid and address the consequences of climate change • Another outcome from the Glasgow Climate Pact is that parties managed to set down rules of a global carbon market • Countries have also agreed to place a cut-off date of carbon credits issued before 2013 to prevent huge amounts of old credits from flooding the market and encourage purchases This pact can influence the framework to consider implementing actions arising from agreements at COP26, such as taking action to address the climate emergency through carbon reduction, bolster resilience to existing hazards, work with partners to implement a circular economy, prioritise nature recovery on land and in water, and partner with renewable energy projects within the Thames Estuary.	Earth.org, "What is the Glasgow climate Pact"? ". Available at: https://earth.org/what-is-the-glasgow-climate-pact/ [Accessed December 14, 2021] HM Government. "PM: Glasgow Climate Pact keeps critical 1.5C global warming goal alive" Available at: https://www.gov.uk/government/news/pm-glasgow-climate-pact-keeps-critical-15c-global-warming-goal-alive [Accessed December 14, 2021] UN Climate Change Conference UK 2021. Available at: https://ukcop26.org/wp-content/uploads/2021/11/COP26-Presidency-Outcomes-The-Climate-Pact.pdf [Accessed December 14, 2021].
The London Plan: The Spatial Development Strategy (SDS) for Greater London (2021)	The London Plan 2021 is the Spatial Development Strategy for Greater London. It sets out a framework for how London will	The Spatial Development Strategy is known as the London Plan. It sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years. The legislation stipulates that the London Plan should only deal with things of strategic importance to Greater London, taking account of the principal purposes of the Greater London Authority, which are:	The London Plan: The Spatial Development Strategy (SDS) for Greater London (2021). Available at: https://www.london.gov.uk/sites/de

Government commitments	Summary	Significance to the Sustainability Framework	Reference
	develop over the next 20-25 years and the Mayor's vision for Good Growth. The Plan is part of the statutory development plan for London, meaning that the policies in the Plan should inform decisions on planning applications across the capital.	• Promoting economic development and wealth creation in Greater London • Promoting social development in Greater London • Promoting the improvement of the environment in Greater London In developing the Spatial Development Strategy, the Mayor has had regard to the following: • There should be equality of opportunity for all people • Reducing health inequality and promoting Londoners' health • Achieving sustainable development in the United Kingdom • Climate change and the consequences of climate change • Promoting and encouraging the use of the Thames, particularly for passenger and freight transport • The resources available to implement the Mayor's strategies • All relevant European Union obligations of the UK and duties like the Public Sector Equality Duty The London Plan Spatial Development Strategy influences the framework through its principal purposes, it broadly feeds into three key pillars of sustainable development (environmental, economic, and social). The framework should work with partners to look at some of these purposes that fit with the three key pillars and with a number of the UN Sustainable Development Goals (UN SDGs).	fault/files/the_london_plan_2021.pdf [Accessed December 14, 2021].
The Paris Agreement (2015)	The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris.	• Limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels • To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century (2050) • It is a binding agreement that brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects This agreement influences the framework in its requirement to manage carbon appropriately to reduce emissions and reach net zero by 2030 in line with Environment Agency targets.	UNFCCC, "The Paris Agreement" Available at: https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement [Accessed December 14, 2021].
The Social Integration Strategy (2018)	The Mayor's strategy for social integration. Improving social integration means helping Londoners to build meaningful and lasting relationships with each other.	Social integration is about how we all live together. It is the extent to which people positively interact and connect with others from different backgrounds. It is shaped by the level of equality between people, the nature of our relationships, and our levels of community participation. Improving London's social integration is one of the Mayor's top priorities. The Mayor's work on social integration has four parts: • Relationships – promoting shared experiences • Participation – supporting Londoners to be active citizens • Equality – tackling barriers and inequalities • Evidence – gathering evidence to measure and evaluate the state of social integration in London The strategy is important to the framework in respect of social value considerations. Infrastructure can play a key part in strategically designing for more equitable social integration and social value, including for wider benefits that are delivered in partnership.	The Mayor's Social Integration Strategy. "All of us: The Mayor's strategy for social integration". Available at: https://www.london.gov.uk/what-we-do/communities/all-us-mayors-strategy-social-integration [Accessed December 14, 2022].

Government commitments	Summary	Significance to the Sustainability Framework	Reference
The Social Value Model 2020 & Guide to Using the Social Value Model **(Including Procurement Policy Note 06/20)**	Provides a consistent approach for central government departments and suppliers to address social value in public sector contracts and supply chain procurement. The model will help streamline and standardise the social value procurement process. The model is relevant for commercial practitioners at all levels within central government departments, executive agencies, and non-departmental public bodies, who must use the model in all stages of the procurement lifecycle concerning their public sector supply chains. Also useful to those whose role includes finance, policy or planning and delivering procurement - provides some alignment with the Public Sector Equality Duty (PSED) in the Equality Act 2010. Procurement Policy Note 06/20 sets out how to take account of social value in the award of central government contracts by using the Social Value Model.	• Focuses on five key themes: Covid-19 recovery, economic inequality, combatting the climate crisis, equal opportunity, and wellbeing • Highlights the import of integrating social value throughout the procurement lifecycle, particularly at the pre-procurement stage, and the import of diverse supply chains • Larger suppliers are not able to win on scale alone. All bidders must set out what social value they will deliver and how they will deliver it. The minimum weighting that should be applied to social value is 10% and awarded contracts will need to report against Social Value metrics to determine if the contract is achieving its key social value objectives. The Social Value model influences the framework to put stronger focus on social outcomes within the sustainability framework and to focus on integrating social value from the earliest preparation, planning and design stages. Could influence the framework to strongly contribute to social value and social equity. The Thames Estuary 2100 delivery team could also look at new and sustainable ways of working within Thames Estuary 2100, which are safe and supportive and optimise access to opportunity. The model investigates the use of key performance reporting metrics for social value.	Government Commercial Function, The Social Value Model 2020. Available at UK https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/940826/Social-Value-Model-Edn-1.1-3-Dec-20.pdf [Accessed December 21, 2021]. UK Government Guide to Using the Social Value Model 2020. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/940827/Guide-to-using-the-Social-Value-Model-Edn-1.1-3-Dec-20.pdf [Accessed December 21, 2021) UK Government Procurement Policy Note 06/20 2020. Available at https://www.gov.uk/government/publications/procurement-policy-note-0620-taking-account-of-social-value-in-the-award-of-central-government-contracts [Accessed January 20, 2022]
The UN Sustainable Development Goals (UN SDGs)	The Sustainable Development Goals or Global Goals are a collection of 17 interlinked global goals designed to be a *"blueprint to achieve a better and more sustainable future for all".* The SDGs were set up in 2015 by the United Nations General Assembly and are intended to be achieved globally, by 2030, in line with the Sustainable Development Agenda 2030.	The agreed upon (by all 193 United Nations Member States) goals aim to develop partnerships, end poverty, ensure prosperity and protect the planet. The 17 goals are. 1. No poverty 2. Zero hunger 3. Good health and well-being 4. Quality education 5. Gender equality 6. Clean water and sanitation 7. Affordable and clean energy 8. Decent work and economic growth 9. Industry, innovation, and infrastructure 10. Reduced inequality 11. Sustainable cities and communities 12. Responsible consumption and production 13. Climate action 14. Life below water 15. Life on land 16. Peace and justice – strong institutions 17. Partnerships to achieve the goal. Influences the framework to consider implementing actions arising from agreements at COP26, such as taking action to address the climate emergency through carbon reduction, bolster resilience to existing and predicted hazards, work with partners to implement a circular economy, prioritise nature recovery on land and in water, and partner with renewable energy projects and social value enterprises within the Thames Estuary.	United Nations, “Sustainable Development Goals”. Available at: https://sdgs.un.org/goals [Accessed December 14, 2021].

Government commitments	Summary	Significance to the Sustainability Framework	Reference
		The UN SDGs can provide a universal language when discussing sustainability with partners. The structure of the UN SDGs can also help the framework organise its own sustainability methods to help establish benchmarking of benefits.	
Tree Health Resilience Strategy (2018)	This strategy sets out plans on how the government will tackle the threats of pests and diseases on English trees and strengthen the country's trees, woods, and forests to better withstand threats.	• Connectivity – enhancing the linear forest and matrix of trees within other habitat settings • Diversity – enhancing the genetic diversity and increasing the structural diversity of our treescape • Condition – encourage healthier trees and thriving woodlands and forests These features can influence the framework to consider recovering, increasing, enhancing, and conserving natural habitats within the plan.	Department for Environment, Food and Rural Affairs. "Tree Health Resilience Strategy". Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/710719/tree-health-resilience-strategy.pdf [Accessed October 28, 2021].
UN Climate Change Conference of the Parties (COP26)	COP26 brought parties together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change. The UK committed to working with all countries and joining forces with civil society, companies, and people on the frontline of climate change to inspire climate action ahead of COP26.	Countries were asked to come forward with ambitious 2030 emissions reductions targets (NDCs) that align with reaching net zero by the middle of the century. COP26 concluded with 197 countries agreeing to a new climate deal, the Glasgow Climate Pact. COP26 resulted in some important new global commitments: 1. Strengthening of 1.5c target set at Paris Agreement in 2015 2. The end of coal in sight 3. Inefficient fossil fuel subsidies targeted 4. Emissions trading rules approved 5. Pledges to reduce methane emissions 6. Ending the sale of internal combustion engines by 2040 7. Financial commitments from developed countries to double 8. Pledges to curb deforestation 9. Countries to revisit and to strengthen their NDCs 10. More than 100 countries committing to end deforestation by 2030 11. Over 100 nations including the US and the EU promising to collectively reduce methane emissions by 30% from 2020 levels by the end of the decade 12. The US and China unveiled a joint declaration to work together to tackle 'existential' climate crisis and China agreed to 'phase down fossil fuels' Influences the framework to consider implementing actions arising from agreements at COP26, such as taking action to address the climate emergency through carbon reduction, bolster resilience to existing and future hazards, work with partners to implement a circular economy, prioritise nature recovery on land and in water, and partner with renewable energy projects within the Thames Estuary.	HM Government, "COP26". (2021) Available at: https://2nsbq1gn1rl23zol93eyrccj-wpengine.netdna-ssl.com/wp-content/uploads/2021/07/COP26-Explained.pdf [Accessed October 28, 2021]. UKP&I, "COP26 – A Summary" Available at: https://www.ukpandi.com/news-and-resources/articles/2021/cop26-a-summary/ [Accessed December 14, 2021]

Table 5. Relevant sustainability standards

Standards	Summary	Significance to the Sustainability Framework	Reference
Biodiversity Net Gain: Good Practise Principles for development – A Practical Guide, 2019 (C776a)	This guide (developed collaboratively by professional bodies CIEEM, IEMA and CIRIA) offers practical advice to achieve biodiversity net gain (BNG) in the UK's land and freshwater environment. It is based on the UK's good practice principles for BNG and applies to all types and scales of development, at all stages in the life cycle of development. It is relevant to developers and all other stakeholders wishing to promote, facilitate and deliver BNG.	• Contains guidance such as aim to offset onsite and where not feasible, local to site of impact, and work outwards • In many cases, delivering BNG onsite may simply not be technically possible or adequate and developers will be obliged to seek off-site offset, although planning authorities will expect compensation to be located close to the site of habitat loss and will aim to penalise strategies that fail to do so • Offset is applicable to non-designated habitat only (designated habitat is considered irreplaceable and cannot be offset, only compensated through the habitat regulations 2019) Relevant to the Sustainability Framework in respect of providing guided industry-standard principles for our approach to the mandatory and internal Environment Agency targets for BNG. Helps us to understand the industry rules for opportunities that strategic offset can bring.	CIEEM, IEMA, CIRIA (2019) Biodiversity Net Gain: Good Practise Principles for development – A Practical Guide (C776a). Available at: https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development-a-practical-guide/ [Accessed December 2021].

Standards	Summary	Significance to the Sustainability Framework	Reference
British Standard Institute (BSI) Standards	British Standards Institute (BSI) has a Memorandum of Understanding with the UK Government, which establishes the position of BSI as the recognized UK National Standards Body. BSI is a non-profit organisation producing technical standards on a range of products and services and also supplies certification and standard-related services to businesses. BSI does have global services in the linked fields of training, systems assessment, product certification and advisory services.	• BSI provides British standards in line with British industries, but if publishing internationally uses a prefix e.g. (BS ISO or BS EN, for Europe). • BSI Standards exist for a range of environmental management, industry, and quality standards etc., such as to standardise Organisational Resilience (BS65000), Environment Management Systems (BS ISO14000), Energy Management Systems (BS ISO50001), Quality Management Systems (BS ISO9000), or Occupational Health and Safety Management Systems (BS ISO45001) etc. The BS standards can influence the sustainability framework by providing technical industry standardisation that ensures compliance. The standards also promote an improved understanding of environment, energy, and sustainability management systems. And encourages best practise thinking to build upon these foundations.	British Standard Institute Shop – BSI Group. Available at: https://shop.bsigroup.com [Accessed December 2021].
Building Research Establishment Environmental Assessment Method (BREEAM)	BREEAM is an environment and sustainability assessment method (accreditation) for master planning, infrastructure, and buildings. It recognises and reflects the value in higher performing assets in sustainability, across the built environment lifecycle. BREEAM does this through third party certification of the assessment of an asset's environmental, social, and economic sustainability performance, using standards developed by Building Research Establishment. This means BREEAM rated developments are more sustainable environments.	• BREEAM is an environment/sustainability assessment method (accreditation) for master planning, infrastructure, and buildings (from new construction to in-use, and refurbishment) • BREEAM provides independent assessment and verification to the built environment • The British Research Establishment Group have recently produced documentation and courses on urban flood resilience and adaptation of property and development • Focuses on solutions to net zero carbon, whole life performance, health and social impacts, circularity and resilience, biodiversity, disclosures, and reporting The sustainability framework could work with external partners to benchmark the wider benefits the framework is providing to the infrastructure, building and master planning landscape, when delivering sustainable flood defence solutions. Our partners may also be considering BREEAM certification for other 'connecting' infrastructure adjoining our fixed asset flood development schemes and BREEAM could also be used as a sustainability measure for active assets i.e. pumping stations, or control buildings for barriers etc. if CEEQUAL is not appropriate.	Building Research Establishment Environmental Assessment Method. Available at: https://bregroup.com/products/breeam/ [Accessed October 21, 2021]. NBS, 'What is BREEAM?' 2016. Available at: https://www.thenbs.com/knowledge/what-is-breeam [Accessed October 21, 2021].
Civil Engineering Environmental Quality Assessment & Award Scheme (CEEQUAL)	CEEQUAL is the world leading sustainability assessment, rating and awards scheme for civil engineering, infrastructure, landscaping, and public realm projects. It addresses some of the most pressing issues the industry faces including climate change, carbon, and resilience. CEEQUAL provides investors, governments & regulators with an infrastructure sustainability benchmark.	• CEEQUAL supports sustainable development by recognising best practice in sustainability, sustainable construction, and green infrastructure • CEEQUAL is a world-leading, comprehensive, and verifiable sustainability assessment and accreditation, based on improving the three key pillars of sustainability (environment, social and economic) • CEEQUAL delivers audited sustainability ratings for understanding the immediate, and broader sustainability benefits of infrastructure delivery – and communicating subsequent awards to investors CEEQUAL can influence the framework by supporting team collaboration and defining responsibilities for sustainability. It drives best practise and performance throughout the life cycle of projects. It could be used in the framework to optimise asset management approaches across the estuary to deliver whole life carbon reduction (in line with PAS2080) and drive towards broader sustainability benefits (environmental, economic, social).	Civil Engineering Environmental Quality Assessment and Award Scheme. 'Achieve sustainable infrastructure with CEEQUAL' Available at: https://bregroup.com/products/ceequal/ [Accessed October 21, 2021].

Standards	Summary	Significance to the Sustainability Framework	Reference
Global Reporting Initiative (GRI)	GRI is an independent, international organisation that helps other organisations take responsibility for their impacts, by providing them with global standards for impact reporting, helping to establish a common language for reporting.	• GRI Standards allow organisations to publicly report the impacts of their activities in a structured way that is transparent to stakeholders and other interested parties • There are a range of GRI reporting standards, such as those for carbon emissions, equality diversity, and inclusion (EDI), waste and circularity, biodiversity, investment etc. • Global organisations can report their sustainability performance against these topics, within a central database that holds them accountable to them GRI could influence the sustainability framework by aligning language, establishing key themes for reporting, and to encourage considering standardised impact reporting methods that work for partners involved in delivering the Plan. The Sustainability Framework must also embed EDI (a GRI standard) within the internal team (as per the Equality Act 2010) and when delivering equitable social value as part of broader flood defence delivery, in partnership with local authorities.	Global Reporting Initiative, 'About GRI' Available at: https://www.globalreporting.org [Accessed October 21, 2021].
Greenhouse Gas (GHG) Protocol Accounting and Reporting Standard	Provides requirements and guidance for companies and other organisations, such as non-governmental organisations, government agencies, and universities, that are preparing a corporate level greenhouse gas emissions inventory. Globally tested and include useful requirements and guidance for streamlining the approach to carbon reduction through a standardised compliance framework.	• A protocol which sets the standards to monitor and measure emissions • Designed to help companies prepare a greenhouse gas inventory that represents a true and fair account of their emissions using standardised approaches and principles • To provide business with information that can be used to build an effective strategy to manage and reduce greenhouse gas emissions • To increase consistency and transparency in greenhouse gas accounting and reporting, among various companies and greenhouse gas programs • To provide guidance to quantify the reductions associated with greenhouse gas mitigation projects for use as offsets or credits etc. • Covers the accounting and reporting of seven greenhouse gases covered by the Kyoto Protocol – including carbon dioxide (CO^2) • Updated in 2015 with the Scope 2 Guidance, which allows companies to credibly measure and report emissions from purchased or acquired electricity, steam, heat, and cooling Important to the framework, because it provides us with a globally verified and standardised method for accounting and reporting carbon reduction, when working with our partners and stakeholders to align carbon approaches.	Greenhouse Gas Protocol (Accounting and Reporting) Standards. Available at: https://ghgprotocol.org [Accessed December 2021].
Institute of Environmental Management and Assessment (IEMA) Pathways to Net Zero: Using the IEMA GHG Management Hierarchy (November 2020)	The Hierarchy was first published in 2009, with a focus on tackling significant and 'at-source' carbon emissions to avoid jumping straight to a carbon offset solution. The updated 2020 hierarchy and briefing paper maintains this focus, but also recognises that the climate emergency now requires an escalation of action (across all hierarchy levels).	• IEMA is the professional body for everyone working in environment and sustainability • This hierarchal standard and briefing paper provide requirements and guidance for reaching Net Zero, with focus on prioritising carbon elimination 'at-source', minimising high energy sources, and substitution (i.e. through renewable sources); but recognises the place of offset, where the former have been prioritised • Includes new diagrams and descriptions, approaches, information sources, principles for practise, and the use of ambitious targets such as net-zero to support net zero planning, informed by direct practice review. This briefing paper sets the standard for the carbon management aspects that the sustainability framework will deliver. It supports standardised net zero transition planning, informed through direct practise review. It updates the previous carbon management hierarchy, but the focus remains on elimination, reduction, substitution and then offset of greenhouse gases, whilst recognising that the climate emergency now requires an escalation of action.	Pathways to Net Zero - using the IEMA GHG Management Hierarchy. Available at: https://www.iema.net/resources/reading-room/2020/11/26/pathways-to-net-zero-using-the-iema-ghg-management-hierarchy-november-2020 [Accessed January 20, 2022].

Standards	Summary	Significance to the Sustainability Framework	Reference
International Organization for Standardisation (ISO)	A non-governmental international organization with a membership of 167 national standards bodies. It brings together experts to share knowledge and develop voluntary, consensus-based, market relevant International Standards that support innovation and provide solutions to global challenges. ISO:14000 and ISO:50000 are a family of standards that provide specific requirements and guidance for environmental and energy management systems.	• ISO standards set out the criteria for an environmental management system. It maps out a framework that a company or organisation can follow to set up an effective environmental management system. • Designed for any type of organisation, regardless of its activity or sector. It can provide assurance to company management and employees as well as external stakeholders that environmental impact is being measured and improved. • Helps companies comply with applicable laws, regulations, and other industry requirements for energy and environment and continually improve in the operation of energy and environmental management. • The ISO14000 Family of Standards, for instance, help organisations minimise how their operations negatively affect the environment and enhancement targets can be set. ISO14001 can influence the framework by establishing systems and processes necessary to ensure an organisation is managing its environmental responsibilities in a systematic manner that improves its environmental performance. ISO50001 is the international standard for energy management systems. It can influence the framework by establishing the systems and processes necessary to improve energy performance, including efficiency, use and consumption.	ISO.org Available at ISO- About Us https://www.iso.org/about-us.html [Accessed December 13, 2021]. ISO, 'ISO14000' Family of Environmental Management. Available at: ISO - ISO 14000 family — Environmental management https://www.iso.org/iso-14001-environmental-management.html [Accessed December 13, 2021]. ISO, 'ISO5001' Energy Management Systems. Available at: https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100400.pdf [accessed December 2021].
PAS (Publicly Available Specification) 2080 – Carbon Management in Infrastructure	PAS 2080 is a global standard for managing infrastructure carbon and has been authored to meet World Trade Organisation requirements. The framework looks at the whole value chain (e.g. water, energy, transport, communications, and waste etc.), aiming to reduce carbon and cost through more intelligent design, construction, and use. PAS 2080 also ensures carbon is consistently and transparently quantified at key points in infrastructure delivery which promotes sharing of data along the value chain.	• Optimise asset management approaches across the estuary to deliver whole life carbon reduction (capital and operational) reductions for fixed and active assets • Works on the principle that the biggest impact can be had in the earliest planning and optioneering stages • PAS 2080 helps organisations in the infrastructure industry comply with PAS 2080 and move towards a more collaborative, sustainable future by identifying areas of improvement and utilising sector best practice This standard is important to the Sustainability Framework as the Thames Estuary 2100 Plan is applicable to the infrastructure industry and follows Environment Agency and partner targets for whole-life carbon reduction. Can influence the framework to ensure carbon is quantified at key points of delivery throughout project life cycles. It concentrates on reducing the greatest carbon at the earliest planning and optioneering stages, before moving to the next steps in the value chain to look at those efficiencies.	Carbon Trust, 'PAS 2080 – carbon management in infrastructure'. Available at: https://www.carbontrust.com/what-we-do/assurance-and-certification/pas-2080-carbon-management-in-infrastructure [Accessed October 21, 2021].
The Carbon Offsetting Codes (released and planned)	The Woodland Carbon Code The Peatland Carbon Code The Planned Saltmarsh Carbon Code	• The Woodland Carbon Code is the quality assurance standard for woodland creation projects in the UK and generates independently verified carbon units. • The Peatland Code is a voluntary certification standard for UK peatland projects wishing to market the climate benefits of peatland restoration and provides assurances to voluntary carbon market buyers that the climate benefits being sold are real, quantifiable, additional, and permanent. • The planned UK Saltmarsh Carbon Code will operate on a similar basis to the Peatland Code and Woodland Code, it is hoped the scheme will pave the way for at least £1 billion of private investment in restoration projects over 25 years, covering 22,000 hectares of habitat. Carbon offset standards can influence the sustainability framework in terms of the framework's approach to carbon net zero and nature recovery, as well as contribute to socio-economic goals depending on the natural capital uses of the offset created. These schemes provide verifiable, quantifiable offset, whilst the IEMA greenhouse gas management hierarchy still applies. The planned saltmarsh code and woodland schemes may have synergies with flood development schemes. Note, the available schemes are currently said to be fairly limited for current / future-facing habitat projects and timelines may apply. In this situation, the framework should already be working with a range of partners to assist their local nature recovery strategies	Carbon Offsetting Codes for Saltmarsh/Woodland/Peatland. Available at: Saltmarsh: https://www.ceh.ac.uk/news-and-media/news/unlocking-billion-pound-investment-restoration-saltmarshes [Accessed January 2022]. Woodland: https://www.woodlandcarboncode.org.uk [Accessed January 2022]. Peatland: https://www.iucn-uk-peatlandprogramme.org/peatland-code/introduction-peatland-code [Accessed January 2022].

Standards	Summary	Significance to the Sustainability Framework	Reference
The Climate Change Committee Independent Assessment of UK Climate Risk (2021)	Independent Assessment of UK Climate Risk (CCRA3) sets out priority climate change risks and opportunities for the UK. The report draws on analysis, consultation and consideration by the Committee involving over 450 people, 130 organisations and more than 1,500 pages of evidence and analysis.	• Amongst the reports produced by the Committee is the 'Infrastructure Report' outlining the priority risks and opportunities identified for infrastructure; and the overarching Technical Report of the Third UK Climate Change Risk Assessment (CCRA3). • The CCRA3 Technical Report was commissioned by the Climate Change Committee but produced through a large consortium of experts coordinated by the University of Exeter in partnership with the Met Office. The assessment could influence the framework in adopting evidence and analysis-based approaches to support the Sustainability Framework's themes, goals and recommendations when working with partners to address the climate and nature emergencies.	UK Climate Risk, 'Climate Change Committee Independent Assessment of UK Climate Risk'. Available at: https://www.ukclimaterisk.org/independent-assessment-ccra3/technical-report/ [Accessed October 22, 2021] Betts, R.A. and Brown, K. (2021). The Third UK Climate Change Risk Assessment Technical Report. Prepared for the Climate Change Committee, London [Accessed December 2021].
The DEFRA Biodiversity Mitigation Hierarchy	Developed to guide the appropriate application of mitigation for biodiversity in development schemes. The hierarchy is applied for any development scheme that may have the potential to impact and affect biodiversity.	• Adopted industry standard applies the hierarchal principle of 'avoid', 'minimise', 'remediate' and 'compensate' for impacts on biodiversity, in that order • Development should seek to first limit impacts using strategic planning, then reduce development footprints that impact nature, before minimising them through mitigation. Residual impacts that cannot be avoided should be remediated and if this is not possible, compensated as a last resort. • Note that biodiversity 'offset' (to a net gain level) is separate to mandatory compensation for protected sites, and only applies to non-designated habitat that can be offset (designated habitat is thought to be irreplaceable e.g. ancient woodland) Relevant to the Sustainability Framework in respect of the hierarchal approach to biodiversity that should be taken to reduce impacts on biodiversity as a result of development schemes. Note that compensation for protected or designated (and thus irreplaceable) habitats is required under the Habitat Regulations (as amended in 2019). Biodiversity offset can be used where there are impacts to 'non-designated' biodiversity habitats that cannot be avoided.	Biodiversity In Planning - Biodiversity Net Gain. Available at: https://www.biodiversityinplanning.org/news/bd-net-gain/ [Accessed December 2021].
The Natural England Biodiversity Metric 3.1 (JP039) and The Small Sites Metric (JP040)	The latest Natural England Biodiversity Metric 3.1 can be used by any development project, consenting body or landowner that needs to calculate biodiversity losses and gains for terrestrial and intertidal habitats. Natural England will be recommending to the Secretary of State that the Biodiversity Metric 3.1 forms the basis of the statutory biodiversity metric used to underpin future mandatory biodiversity net gain as set out in the Environment Act 2021. The Small Sites Metric is a simplified version of the Biodiversity Metric 3.1. It has specifically been designed for use on small development sites where the project chooses to do so. It is not appropriate to use the Small Sites Metric to calculate offsite losses and gains.	• The metrics are designed as accounting tools for helping to leave biodiversity in a measurably better state than the pre-development baseline. • The metrics help development schemes to achieve biodiversity 'offsets' to a net gain level of at least 10%, which is a mandatory requirement of the Environment Act 2021 from late 2023 (and already being requested through planning frameworks). • The metrics still rely on the mitigation hierarchy in respect of avoiding, minimising, mitigating and compensating impacts, before net gain offset. • The metric currently includes both intertidal and terrestrial habitats. Defra is currently working towards a consultation on the principles for marine net gain. Natural England will update the metric to allow for a better integration of intertidal and sub-tidal habitats as marine net gain evolves. Important to the framework for calculating biodiversity impacts and offset to a net gain level, providing both the accounting tools and user guide required to deliver both the mandatory planning and Environment Agency internal targets for biodiversity net gain.	Natural England, Biodiversity Metric 3.1 and Small Sites Metric. Available at: http://publications.naturalengland.org.uk/publication/6049804846366720 [Accessed December 2022].

Standards	Summary	Significance to the Sustainability Framework	Reference
The Science Based Target Initiative (SBTi)	Science Based Targets provide a clearly defined pathway for companies to reduce greenhouse gas emissions, helping prevent the worst impacts of climate change and future-proof business growth. Targets are considered 'science-based' if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.	• The SBTi defines and promotes best practice in science-based target setting based on keeping below 1.5c of warming by achieving net zero by 2050. Offering a range of target-setting resources and guidance for financial institutes and organisations, the SBTi independently assesses and approves companies' targets in line with its strict criteria. • The SBTi does not currently assess targets for cities, local governments, public sector institutions, educational institutions, or non-profit organizations. However, the SBTi encourage these stakeholders to consider science-based target setting methods on their own that align with the SBTi. Cities can register their interest in setting targets through the Science Based Targets Network. Companies report that adopting a science-based target: • Boosts profitability • Improves investor confidence • Drives innovation • Reduces regulatory uncertainty • Strengthens brand reputation. This standard is relevant to the Sustainability Framework 'carbon management' theme. Whilst the SBTi does not apply to the public sector and local government, our partners, stakeholders, and cities may be committed to these targets, and we also need to observe the need to keep temperatures below 1.5c. Non-qualifying organisations can still align with the SBTi without joining.	Science Based Target Initiative – Science Based Targets. Available at: https://sciencebasedtargets.org [Accessed December 2021].
The UK Soil Farm Carbon Code (Planned 2022 - 2026)	A national consortium led by Sustainable Soils Alliance is developing a UK Farm Soil Carbon Code (UKFSCC). This will set out a range of formal protocols that allow farmers to measure, record and verify changes in soil such as carbon stock and greenhouse gas emissions as a result of adopting specific farming practices. University of Leeds is part of the consortium and academics from the university are contributing via funding from the Yorkshire Integrated Catchment Solutions Programme (iCASP).	• Key role in moving farmers to net zero by 2050 • Key role in encouraging regenerative farming practises that regenerate the environment • Diversification of farmland for sustainable management practises • Allows farmers to measure, record and verify changes in soil carbon stock and greenhouse gas emissions • It will also establish agreement on principles such as permanence, saturation, additionality, and leakage Relevant to the framework in terms of working with partners to develop a net zero and nature recovery approach - and where partners need to adopt sustainable farming practises that promote resilience along the Thames Estuary.	The UK Soil Farm Carbon Code. What is it? Available at https://icasp.org.uk/projects-2-2/uk-farm-and-soil-carbon-code-a-feasibility-study/ [Accessed January 2022]. The UK Soil Farm Carbon Code. What is it? Available at: https://sustainablesoils.org/soil-carbon-code/about-the-code [Accessed January 2022].

Table 6. Relevant Thames Estuary 2100 Plan partner's commitments to sustainability

Other partner and Environment Agency commitments	Summary	Significance to the Sustainability Framework	Reference
Building Resilience in Canvey Island (BRIC) - Thames 21	Thames21 is empowering communities in Canvey Island, Essex, to co-create solutions to flooding with public authorities as part of an exciting two-year pilot project funded by the European Union. Building Resilience in Communities (BRIC) is a €3.4 million initiative led by Plymouth City Council. The project has secured 70% grant funds from the Interred France-Channel-England programme.	• The project will give residents the chance to help shape solutions to flood management by developing systems and procedures to share power and responsibility more equally with the public bodies that have traditionally dealt with the issue. • Residents will be given the chance to understand and chart the surface water and flooding risks and to work with authorities to find the solutions. These new social innovation methods will bring communities and flood risk management authorities together, help adapt areas facing flood risk to make them more resilient to climate change whilst supporting economic recovery at neighbourhood level. • Overall, the BRIC project https://www.channelmanche.com/en/projects/approved-projects/building-resilience-in-flood-disadvantaged-communities/will create eight community flood resilience networks, six skills development schemes for disadvantaged people, a community-based hazard analysis framework and a toolkit on best practice and guidance. A web platform will also be created to collate all the knowledge about new methods and lessons learned, with the aim of transforming flood risk management. Relevant to the Sustainability Framework in terms of its climate resilience and social inclusion objectives (e.g., working with diverse and non-usual partners, creating a springboard into sustainable jobs, working together	Thames 21. "Building Resilience in Canvey Island". Available at: https://www.thames21.org.uk/connecting-communities/building-resilience-in-flood-disadvantaged-communities-bric/ [Accessed June 2022].

Other partner and Environment Agency commitments	Summary	Significance to the Sustainability Framework	Reference
		with communities on creative solutions through early and regular participatory discussions, promoting citizen science and upskilling, delivery of resilient flood defence solutions and potential for nature-based solutions like sustainable drainage systems).	
Corporate Environment Plan 2021 (Transport for London)	The Transport for London's (TfL) Corporate Environment Plan sets out how TfL's will achieve its environmental ambition of addressing the climate emergency, air quality, green infrastructure, sustainable resources and delivering best environmental practices through its operations, maintenance, and construction activities.	• Reduce carbon emissions and harmful air pollutants • Bolster resilience to the impacts of climate change • Promote and improve existing green infrastructure • Protect, connect, and enhance biodiversity, habitats, and ecosystem services • Encourage sustainable use of resources and supporting low-carbon circular approaches • Follow best sustainable practices The Corporate Environment Plan will support the Environment Agency aims of addressing the climate and nature emergencies, bolstering resilience, improve air quality, work within a circular economy, promote green infrastructure, and implementing sustainable best practices. Opportunity to better connect both social infrastructure and nature habitats, as well as levelling up across the estuary.	Transport for London (TfL). "Corporate Environment Plan 2021". Available at: https://content.tfl.gov.uk/tfl-corporate-environment-plan-29-september-2021-acc.pdf
Environment Agency – 5-Year Action Plan (EA2025: Creating a better place)	This action plan sets out how the EA will build on past achievements to accelerate to a fair, green, and just recovery. With the Government's 25 Year Environment Plan and forthcoming Environment Bill as maps, this plan will act as our compass, allowing the Environment Agency and partners to chart a course towards a healthier, greener, and more prosperous country in 2025.	• Build a nation resilient to climate change • Achieve healthy air, land, and water and aid nature recovery • Focus on and encourage green growth and a sustainable future • Work to influence businesses, citizens, and communities to increase their resilience by helping them to adapt to future climate risks • Deliver environmental net gain and 'create a sense of place' The framework will support Environment Agency aims to address the climate and nature emergencies, bolster resilience and work to support sustainable, socio-cultural value for communities.	HM Government. "EA2025". Available at: https://www.gov.uk/government/publications/environment-agency-ea2025-creating-a-better-place [Accessed October 28, 2021].
Environment Agency - Climate adaptation reporting third round (2021)	The Environment Agency's third adaptation report to Defra, under the adaptation reporting power of the Climate Change 2008 Act.	• Climate ambition to create a net zero nation resilient to climate change • A need for an adaptation approach • Collaborating with multiple partners • Investing for change (innovating to unlock new sources of funding) • Working with nature • Designing low-carbon futures • Strengthening community resilience • Helping businesses prepare • Stepping up to level up The framework will support Environment Agency aims to address the climate and nature emergencies, bolster resilience and work to support sustainable, socio-cultural value for communities. Opportunity to place additional focus on inequalities between the inner and outer estuaries to level-up the estuary.	Environment Agency. Climate adaptation reporting third round (2021). Available at: https://www.gov.uk/government/publications/climate-adaptation-reporting-third-round-environment-agency [Accessed December 14, 2021].
Environment Agency – eMission Strategy	eMission is the Environment Agency's environmental and sustainability strategy which sets out how it intends to contribute to sustainable development within the agency. This is in direct response to UK government and European targets for tackling climate change.	• The Environment Agency has reviewed its own environmental impact and established that 70% of this is caused by its supply chain. As a result, the Environment Agency has extended the scope of its strategy to include suppliers and has challenged them to reduce their impact by 20%. • eMission promotes 4 key components: the delivery of 'environmental net gain', 'responding to the climate emergency', 'optimising our use of natural resources' and 'benefiting people and communities'. The framework will support Environment Agency aims to address the climate and nature emergencies, bolster resilience and work to support sustainable, socio-cultural value for communities, which will include addressing all four key components of eMission.	Available on the Environment Agency Intranet [Accessed December 14, 2021].

Other partner and Environment Agency commitments	Summary	Significance to the Sustainability Framework	Reference
Environment Agency – Flood and Coastal Erosion Risk Management (FCERM) Strategy (2020 – updated 2021)	The Flood and Water Management Act 2010 places a statutory duty on the Environment Agency to develop a National Flood and Coastal Erosion Risk Management (FCERM) Strategy for England. The FCERM strategy describes what needs to be done by all risk management authorities involved in flood and coastal erosion risk management for the benefit of people and places. The strategy sets out a vision of a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100.	• Climate resilient places by working with partners to bolster resilience to flooding and coastal change across the nation, both now and in the face of climate change. • Making growth and infrastructure resilient in tomorrow's climate through the right investment and planning decisions to secure sustainable growth and environmental improvements, as well as infrastructure resilient to flooding and coastal change. • Preparing the nation to respond and adapt to flooding and coastal change. Ensuring local people understand their risk to flooding and coastal change and know their responsibilities and how to take resilient action. Relevant to the framework in respect of building in approaches to its three ambitions, which increasingly incorporate sustainable flood management approaches and wider benefits, such as sustainable urban drainage, environmental net gain, nature recovery, net zero, natural flood management etc.	HM Government. "National Flood and Coastal Erosion Risk Management". Available at: https://www.gov.uk/government/publications/national-flood-and-coastal-erosion-risk-management-strategy-for-england--2 [Accessed October 28, 2021].
Environment Agency – Net Zero Roadmap (2021)	An ambitious target to reduce emissions and take carbon out of the atmosphere.	• Reduce EA's total carbon emissions, including in the supply chain, by 45% by 2030. • Offset the rest through projects that lock up carbon and offer wider benefits, such as reduced flood risk and more habitat to boost biodiversity. Relevant to the framework in respect of carbon reduction targets and carbon management approaches.	Environment Agency. "Reaching net zero by 2030". Available at: https://www.gov.uk/government/publications/environment-agency-reaching-net-zero-by-2030 [Accessed October 21, 2021].
Environment Agency – Riverside Strategy Approach	The riverside strategy approach advocates early planning to help achieve significant improvements when upgrading flood defence. The riverside strategy approach gives planners, place-makers, and local communities an opportunity to develop a vision for their future riversides.	• Collaborative approach • Long-term planning • Expanding benefits beyond flood defence i.e., environment, economic, social, and cultural • Includes natural capital, natural flood management etc. to reduce carbon and promote biodiversity • Introduces the Riverside Strategy Approach for local authorities to shape place-based strategies Influences the framework to deliver to the three key pillars of sustainable development (environmental, economic, and social) - puts more focus on integrating habitat and biodiversity into flood defence solutions and delivery. Focuses on the Riverside Strategy Approach being developed by local authorities in the areas that they manage, to ensure a suitable place-based approach – in conversation with communities.	The Thames Estuary 2100 Plan. The Riverside Strategy Approach. Available at: https://defra.sharepoint.com/teams/Team598/TE2100 External Partner Site/Forms/AllItems.aspx?RootFolder=%2Fteams%2FTeam598%2FTE2100%20%20External%20Partner%20Site%2F2%2E%20The%20Riverside%20Strategy%20Approach&FolderCTID=0x012000126FBF7C3FBD0543B5B4C29454652FDE [Accessed October 21, 2021].
Environment Agency – TEAM2100 (Thames Estuary Asset Management Strategy)	TEAM2100 is the Environment Agency's 10-year programme to refurbish and replace tidal flood defences in London and the Thames estuary.	• TEAM2100 investigations provide information about the condition of individual defences and about the whole asset system • A cost-effective balance between maintenance repair & replacement • Using lifecycle analysis to identify and take the right actions at the right time • Minimising carbon emissions (construction, operation, embodied, avoided) • Considering long-term asset resilience in the face of climate impacts • Manage the risk of flooding to people, property and in the environment • Balancing cost-effectiveness between third parties and EA investment • Maximising opportunities for wider social, economic, and environmental benefits Relevant to the framework in respect of delivering to wider social, economic, and environmental benefits over the last ten years, whilst minimising carbon emissions and bolstering resilience. The 10-Year review has provided further recommendations to achieve wider benefits in each of these areas.	Environment Agency (2021). Thames Estuary 2100 – Policy Paper: An overview of the Thames Estuary 2100 Plan (2012). Available at: https://www.gov.uk/government/publications/thames-estuary-2100-te2100/thames-estuary-2100-te2100 [Accessed October 21, 2021].

Other partner and Environment Agency commitments	Summary	Significance to the Sustainability Framework	Reference
Healthy Living Streets for London Approach	Prioritising walking, cycling and public transport to create a healthy city.	Seeks to deliver to 10 Healthy Street Indicators, as key ambitions, as follows: • Pedestrians from all walks of life • People choose to walk, cycle, and use public transport • Clean air • People feel safe • Not too noisy • Easy to cross • Places to stop and rest • Shade and shelter • People feel relaxed • Things to see and do. Relevant to the framework as potential opportunities to work in partnership to deliver shared themes for social value, equality, and equity as part of design values, and wider benefits e.g. natural capital, integrative cultural arts spaces, educational centres, connective public realm including, accessible safe and attractive access.	Transport for London (2017). "Healthy Living Streets for London Approach (2017)". Available at: https://content.tfl.gov.uk/healthy-streets-for-london.pdf [Accessed December 14, 2022]. Transport for London (2017). "Healthy Living Streets Approach – How can Green Infrastructure contribute to the Healthy Living Streets Approach". Available at: https://content.tfl.gov.uk/contributions-of-gi-to-healthy-streets-approach.pdf [Accessed December 14, 2022].
Historic England's Climate Change Strategy	This strategy outlines Historic England's vision and aims, what they are doing as an organisation, and how they will prioritise their work in response to the climate crisis. It also explains how Historic England will work in partnership, and support and empower people outside of the organisation to combat climate change.	There are three areas this strategy addresses: 1. Mitigation: achieving net zero – with the aim to proactively remove sources of emissions to achieve net zero by 2040 2. Managing risks: understanding the threats of climate change – This looks to assess and respond to the impact of climate change on heritage by working with people and partners 3. Adaptation: preparing for a changing climate – Also assessing the impacts of climate change, but focused on engaging and equipping people to take action to support places of importance to them This strategy influences the framework by considering the aspirations of Historic England and the opportunities to work in partnership with them to deliver social and cultural value. These aims can also be linked to how we can work with Historic England to deliver joint ambitions for achieving net zero and developing climate resilient heritage for all within the estuary.	Historic England. (2022). Our Climate Change Strategy [online]. Available at: https://historicengland.org.uk/whats-new/features/climate-change/our-strategy/ [Accessed January 27, 2023].
Living in the Landscape Green Infrastructure Strategy (2020)	Green Infrastructure Framework - 'Living in the Landscape', which captures Thamesmead's strategic approach to managing and utilising the unique blue and green spaces of Thamesmead.	• 'Living in the Landscape' is about making the most of Thamesmead's unique natural assets. Thamesmead own 65% of the land which includes 240 hectares parks and green space; 7km of canals; five lakes; 5km of river frontage and 30,000 trees. The framework sets out five themes: The big blue – to see the full potential of Thamesmead's lakes and canals realised. • Wilder Thamesmead – maintaining and creating habitat for wildlife • A productive landscape – the landscape is used to educate, from outdoor classrooms to learning environmental skills such as food growing • Active Thamesmead – enjoying an active lifestyle which improves people's health and wellbeing • Connected Thamesmead – improving the connectivity within Thamesmead and into central London This strategy influences the framework to consider working with Thamesmead and developers to deliver social and community outcomes, as well as those linked to nature recovery, greener landscapes, culture/arts.	Thamesmead. "Living in the Landscape Green Infrastructure Strategy (2020) driven by Peabody". Available at: https://www.thamesmeadnow.org.uk/news/living-in-the-landscape-launched/ [Accessed June 06, 2022].

Other partner and Environment Agency commitments	Summary	Significance to the Sustainability Framework	Reference
London Plan Urban Greening Factor (UGF)	London Plan Policy G5 requires all major developments to include urban greening as a fundamental element of site and building design. The policy introduces the use of an Urban Greening Factor (UGF) to evaluate the quantity and quality of urban greening provided by a development proposal. A UCF calculator has been prepared to help applicants calculate the UGF score of a scheme and present the relevant information as part of their application.	The guidance helps support boroughs and applicants in meeting the requirements of policy G5. It provides guidance to boroughs to inform the local application of the policy and information to help applicants to apply the Urban Greening Factor (UGF) to proposed developments. • This guidance has been prepared by the Greater London Authority (GLA) with input from AECOM and has been developed following feedback from stakeholders at various workshop events in 2019/2020. An equality impact assessment has been prepared for the guidance. • Public engagement on The Urban Greening Factor guidance was carried out between 30 September and 20 December 2021. Details of the consultation can be found on the GLA's engagement portal. The final guidance will be published in 2022. A consultation summary document will be published alongside the final guidance. This plan can help influence the framework to deliver environmental net gain, as per the Government 25 Year Plan, it can enable the more urban areas to provide a degree of connectivity, promote plants and blue/green infrastructure. And work with other partners to deliver wider greening that bolsters resilience, biodiversity net gain and wellbeing.	The Mayor of London (2022). "London Plan Urban Greening Factor (UGF)". Available at: https://www.london.gov.uk/what-we-do/urban-greening-biodiversity-net-gain-design-guide [Accessed June 06, 2022].
London Rewilding Taskforce	The London Rewilding Taskforce is an advisory group being convened by the Mayor of London. Explores opportunities for rewilding in London to support nature recovery and enhance biodiversity, while bringing benefits to Londoners and addressing the climate and ecological emergency.	The key aims of the Taskforce are to: • Consider how rewilding practices could inform conservation land management in London to support recovery of nature across the capital and how this could be funded • Build consensus on what rewilding means in London, where practical opportunities might exist, and how rewilding might be incorporated into the development of a Local Nature Recovery Strategy for London • Communicate what rewilding means in London to a broader public audience and engage Londoners in action to rewild the city. The Mayor announced that he would establish the London Rewilding Taskforce in December 2021, alongside the launch of the Rewild London Fund. • The Taskforce will meet three times between Spring to Autumn 2022 Can influence the framework to consider wider environmental net gain and nature recovery through the circular economy; and look towards working with our partners to rewild London where practical opportunities exist in the context of wider benefits from flood defence delivery. This includes rewilding via any Environmental Land Management Strategies (ELMs) that can apply across the Thames Estuary.	Mayor of London. London Rewilding Taskforce (2022). Available at: https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/london-rewilding-taskforce [Accessed June 14 2022].
Marine Net Gain Consultation (DEFRA) 2022	Marine net gain will work alongside biodiversity net gain (BNG) to ensure nature and biodiversity are at the centre of all decision-making and design, both on land and in our marine environment. The Defra consultation runs for 12 weeks from June 2022 until 30 August 2022.	• The government's response to the 2018 terrestrial biodiversity net gain (BNG) consultation confirmed the intention to develop and consult on an appropriate regime for the marine environment which builds on commitments in Defra's 25 Year Environment Plan. • Marine net gain aims to put the marine environment into recovery. It will do so by requiring that all in-scope developments leave the environment in a better state than before, and thereby will firmly embed environmental improvement into the heart of infrastructure planning and delivery. • This consultation takes forward this work and the responses will help inform more detailed policy development. This consultation will apply only to development in the English inshore and offshore region. This consultation can influence the framework by providing potential opportunities to provide a net gain enhancement for all in-scope developments. This will depend on the options that emerge during the adaptable plan period and upon the consultation outcomes but could be favourable for schemes that present opportunities for net gain in the marine environment.	Defra (2022). Marine Net Gain Consultation. Available at: https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-the-principles-of-marine-net-gain/ [Accessed February 10, 2022].
MoRPh Estuaries: Championing Citizen Science (ArcGIS)	Thames21 is leading a collaborative project to test a new citizen science programme to monitor the health of estuary habitats. The project ran from December 2021 to April 2022 and is funded by the Environment Agency's Championing Coastal Coordination fund. The project partners are the Wyre River Trust, the Rivers Trust, Cartographer and Queen Mary University.	• Volunteers are trained as citizen scientists to carry out geomorphology assessments and help fine-tune the method, using the Thames and Wyre estuaries as test sites. • The project culminated in a stakeholder conference on the 22nd April 2022 to share results and discuss its application on the Thames estuary. It was open to members of the public, local authorities, developers, and statutory authorities responsible for nature protection. Following the completion of the project, new opportunities for expanding the project on the Thames will be sought. This initiative can influence the framework by adding value from citizen scientists, giving communities ownership of some of the data recording process and enable open data to be created and shared freely to help inform the project.	Thames 21. MoRPh Estuaries: Championing Citizen Science (ArcGIS). Available at: https://www.thames21.org.uk/connecting-communities/morph-estuaries-communities-assessing-estuarine-habitats/ [Accessed June 14, 2022].

Other partner and Environment Agency commitments	Summary	Significance to the Sustainability Framework	Reference
Port of London Authority (PLA) Thames Vision 2050 Framework (2022)	As a Trust Port, the Port of London Authority's ethos is to pass the Thames on to future generations in a better condition than we inherited it. This is at the heart of Thames Vision 2050.	• Trading Thames: the river will be a cornerstone of the UK's net zero economy, remaining the country's largest port, switching to net zero operations, and increasing connectivity to road and rail infrastructure. Technological innovation will be actively embraced, supporting smarter, more efficient businesses and urban logistics transform. • Natural Thames: The Thames will be the cleanest it has been in generations, supporting more biodiversity and wildlife, balancing natural capital and economic value. It will be recognised for clean air, natural flood defence, capturing carbon and nutrients as a valued, thriving habitat. • Destination Thames: More people will be living, working, and relaxing on and around the Thames. The river will be accessible to all, a national and international icon for the city, the country, and our values. There will be more jobs, more sporting and leisure opportunities and more visitors, drawn to the river as the best way to enjoy London and the Thames Estuary, its vibrant economy, and its many attractions. Groups accessing the river will be truly representative of the local and wider communities. The PLA framework can influence the sustainability framework to consider including measures such as working with partners to deliver net zero, deliver resilient infrastructure to protect communities, bolster habitats and natural capital, transform technology / data systems; and improve access, diversity, and inclusion – including boosting access to opportunities along the Thames Estuary via employment and education schemes and provision of connective, cultural spaces.	Port of London Authority (PLA) (2022). "Thames Vision 2050 Framework". Available at: http://pla.co.uk/About-Us/The-Thames-Vision/Thames-Vision-2050-Safe-Smart-Sustainable-and-Inclusive [Accessed February 10, 2022].
SEE Park, Essex (2050)	Councils across South Essex are working together to promote prosperity and wellbeing in our region and make it the place to live, visit and do business and have developed a vision for the SEE Park (2050)	• A vision for South Essex to become an extraordinary parkland setting providing an attractive offer for modern living that supports residents, businesses, industry, tourism, and leisure activities, has been announced by ASELA. • The South Essex Estuary (SEE) Park plans include a continuous and accessible coastal path stretching from Tilbury Fort to Shoeburyness, ensuring every home will have easy access to high quality green space, creating new woodlands, restoring marshlands, and completing a huge network of natural landscapes. • The park will be a single, unified, regional parkland which will ensure that the natural wonders which abound throughout Essex are all connected as part of the same ecological community. This single park system will address the challenges of providing access to green spaces, improving health and well-being and air quality, mitigating the effects of climate change including flooding, boosting eco-tourism and green job creation, restoring biodiversity, and helping the region achieve a net zero carbon footprint. This vision can influence the sustainability framework across all of its themes, from improved resilience and adapting to climate, to bolstering social value (including through circular / green jobs, ecotourism and community health and wellbeing), through to vast nature recovery and subsequent carbon absorption. There may also be opportunities for renewable energy generation.	The Association of South Essex Local Authorities (ASELA). "SEE Park 2050". Available at: https://www.southessex.org.uk/news/more-than-a-park-vision-for-south-essex-estuary-see-park-announced [Accessed June 2022].
The Bug Life Project – Rethink Nature	The Species Champions Project for Bug Life partners Members of Parliament from England with wildlife organisations to bring political support to the protection and promotion of threatened wildlife. Each MP becomes a 'Species Champion', adopting their own species. The project is run by the Rethink Nature partnership, a group of seven wildlife organisations working together to make a difference to species conservation, with additional support.	• The Species Champions project for Bug Life is run by the Rethink Nature partnership, a group of seven wildlife organisations working together to make a difference to species conservation. • They are Amphibian and Reptile Conservation, Bat Conservation Trust, Bug life, Bumblebee Conservation Trust, Butterfly Conservation, Plantlife and the RSPB. Additional support is provided by the Angling Trust, the People's Trust for Endangered Species, and the British Hedgehog Preservation Society. • This is one of a number of initiatives spanning the United Kingdom, involving political representatives from England, Scotland, Wales, and Northern Ireland working together with wildlife organisations to bolster wildlife The RSPB, a key stakeholder of the framework, supports the urban London 'Bug Life' Projects, among other pollinator projects and this can influence the framework to consider opportunities for invertebrates across the estuary, including in urban areas.	Species Champions Project for Bug Life. Available at: https://www.buglife.org.uk/species champions/ [Accessed June 2022].

Other partner and Environment Agency commitments	Summary	Significance to the Sustainability Framework	Reference
The Climate Risk Mapping Datastore	A series of London-wide climate risk maps produced to analyse climate exposure and vulnerability across Greater London.	• These maps were produced by Bloomberg Associates in collaboration with the Greater London Authority to help the GLA and other London-based organisations deliver equitable responses to the impacts of climate change and target resources to support communities at highest risk. • Climate vulnerability relates to people's exposure to climate impacts like flooding or heatwaves, but also to personal and social factors that affect their ability to cope with and respond to extreme events. High climate risk coincides with areas of income and health inequalities. A series of citywide maps overlays key metrics to identify areas within London that are most exposed to climate impacts with high concentrations of vulnerable populations. • The Mayor is addressing these climate risks and inequalities through the work of the London Recovery Board. This datastore can influence the framework to consider including climate resilience and social equity themes – and ways in which equity can be boosted by improving climate resilience and reducing climate vulnerability along the Thames Estuary. Relevant to the framework in terms of influencing themes that include aspects that bolster climate resilience and social resilience and reduce vulnerability within communities – including providing useful data for use for understanding social equity and climate vulnerability.	Greater London Authority and Bloomberg Associates. "The Climate Risk Mapping Datastore". Available at: https://data.london.gov.uk/dataset/climate-risk-mapping[Accessed June, 14 2022].
The Clydebank Declaration for Green Shipping Corridors (2022)	A declaration made between declaration signatories at the Conference of the Parties 26 (COP 26) as an international ambition between ambitious countries for green shipping.	• Recognises the benefits of pursuing synergies between decarbonisation and clean air policies in shipping, and building on existing measures related to the reduction of pollution from ships under the International Convention for the Prevention of Pollution from ships (MARPOL). • Express great concern regarding the findings from the Fourth IMO Greenhouse Gas Study (2020), which estimates that if no further action is taken, international shipping emissions are expected to represent 90% to 130% of 2008 emission levels by 2050. • Expresses great concern also regarding the findings of the IPCC Working Group I contribution to the Sixth Assessment Report (2021), which states that global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in carbon dioxide (CO^2) and other greenhouse gas emissions occur in the coming decades, and hence, endorse the need for international shipping to keep accelerating its level of action. Influences the sustainability framework to work with partners on seeing how the hydro-economy (and other fuels and batteries) and the blue economy can be introduced to the Thames Estuary for new markets in green shipping, which aims to boost green jobs, and benefit the biodiversity and climate emergencies.	Department for Transport Policy Paper: COP 26: Clydebank Agreement for green shipping corridors (2022). Available at: https://www.gov.uk/government/publications/cop-26-clydebank-declaration-for-green-shipping-corridors/cop-26-clydebank-declaration-for-green-shipping-corridors [Accessed September 2022].
The Greater Thames Landscape Plan (RSPB) 2020 to 2030	This Plan sets out how the RSPB will get the best possible value for nature from the existing suite of habitats but recognises the climate impacts and describes a sustainable future vision for the Estuary.	• Short term: Follow the Lawton principles of deliver a bigger, better, and more connected wetland landscape, both saline and freshwater. Their Nature Reserves will act as high quality 'hot spots' in the wider landscape and their partnerships with farmers, other non-governmental organisations (NGOs), government, and local communities will help 'fill in the gaps' by creating and restoring new habitat. • Long term: Recognise that climate change will play a role in shaping the future character of the landscape, with rising sea levels and reduced freshwater availability at key times of year. Starting a conversation about a different Thames landscape in the future; one with bigger areas of continuous habitat, more saline influence, and less intensive management. This strategy can influence the framework to consider nature recovery in ways that work with other stakeholders to achieve more connected blue space and less fragmented nature recovery. It could help with strategic planning of key locations and make way for further habitat recovery, including thinking about more natural flood management solutions, more continuous and less fragmented habitat – and habitat that has potentially more saline/freshwater influence depending on the defence options.	C.Rose, M.Nowers, K.Alexander, R.Fancy, I,Donovan, A.Gouldstone, J.Nash, M.Ausden (RSPB, 2020): The Greater Thames Landscape Plan: 2020 to 2030.
The Illuminated River Light Project	Illuminated River is a long-term art installation transforming the Thames at night with an orchestrated series of light works that span nine bridges in central London. Its subtly moving sequences of LED light symbolically unify the Thames bridges, drawing inspiration from the spirit and	• Public art commission using LED (lower energy lighting) to encourage outdoor use of the Thames area, providing safe and attractive walkways that are friendly to wildlife along key bridges, along the Thames. • Illuminated this summer (2022) with a program of events and activities that support integration. A cultural and arts initiative that supports social integration with the outdoors, including promoting physical access and activity along the river. Supported by the City of London and Major of London among others. Influences the social and nature recovery (e.g., wildlife-friendly lighting) aspects of the framework.	Illuminated River Public Arts Commission. Available at: https://illuminatedriver.london (Accessed June 06, 2022].

Other partner and Environment Agency commitments	Summary	Significance to the Sustainability Framework	Reference
	history of the river and from the architectural and engineering heritage of its bridges.		
The Mayors Green New Deal	The Green New Deal is a key part of the mayor's ambitions to make London a zero-carbon city by 2030 and the capital's green and resilient recovery from the coronavirus crisis.	• The Mayor of London, Sadiq Khan's fund seeks to boost green jobs (including through a circular economy), tackle the climate and ecological emergencies, improve air quality and address inequalities. • This will be achieved through the funds supporting projects to decarbonise the built environment / provide green transport and public realm / provide access to green space and nature / boost green economic, industrial, and political foundations / bolster the green economy (including renewable energy markets). This fund and these funded projects can influence the strategy to work alongside partners delivering themes to tackle the climate and nature emergencies and to seek partnership opportunities between the framework and partner projects.	The Mayor of London: The Mayors Green New Deal Fund. Available at: https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/climate-change/zero-carbon-london/green-new-deal-fund [Accessed September 2022].
The Thames Landscape Strategy: Our Vision	The Thames Landscape Strategy works in partnership with our funding partners, other organisations, and the local community to implement guidance, projects, and management proposals that 'conserve, promote and enhance one of the world's great river landscapes between Hampton and Kew'. It has set out its strategy for the next 100 years. Keen on creating 'a sense of place': "Landscape is not only seen with the eye; it is felt in the heart".	• Championing community action by bringing together a partnership of organisations, individuals and community groups that have an interest in the Arcadian Thames • Implementing policies, projects and management proposals set out in the Thames Landscape Strategy • Improving sites of nature conservation value and create new opportunities for biodiversity and flood risk management • Protecting and enhancing historic buildings, historic parks, and gardens, landscapes, and ancient monuments • To raise awareness of the Thames Landscape Strategy, increase educational opportunities and promote understanding of the Thames environment and ways of protecting, conserving, and enhancing that environment • Focused on people, and the ways they connect with their physical, aesthetic, historic, natural, recreational, and spiritual landscape This strategy can influence the sustainability framework in several ways. For instance, by placing importance on 'a sense of place' by championing community action and focusing on people and the way they connect to, and use, their surroundings. The strategy also emphasises the need to enhance culturally and historically important landscapes and create new opportunities for biodiversity, and natural capital. Projects such as 'Rewilding Arcadia' are set to achieve multiple landscape benefits through delivery of a series of nature-based flood risk management projects that also sequester carbon and bolster resilience. These projects include restoring the lost floodplain to re-connect water, people, heritage, and wildlife with the natural cycles of the Thames. There are opportunities to provide access for 'all' to improved landscapes, by involving the community directly, and increasing voluntary or training opportunities.	Thames Landscape Strategy. "Thames Landscape Strategy: Our Vision". Available at: https://thames-landscape-strategy.org.uk/who-we-are/vision/community-groups/ [Accessed June 06, 2022].
Urban Greening for Biodiversity Net Gain: A Design Guide (2021)	The Mayor's London Plan requires new developments to make urban greening a fundamental element of their site and building design, and to deliver net gains for biodiversity.	• This guide, was produced in partnership with London Wildlife Trust, shows how urban greening and biodiversity net gain can be achieved through design approaches that also help to create engaging, healthy, and resilient places for people too. • It introduces simple design considerations for different types of urban greening features which can make space for nature in our built environments and is relevant to anyone involved in the design of new developments. It should not be seen as a replacement for professional ecological or landscape advice, its aim is to inspire more projects to consider how they can adopt an interdisciplinary approach to make the city greener and wilder. Can influence the framework by including urban greening within our nature recovery objectives and working with partners using this guidance to establish how mandatory biodiversity net gain (and internal targets) and further urban greening can be achieved.	Mayor of London. "Urban Greening for Biodiversity Net Gain". Available at: https://www.london.gov.uk/what-we-do/urban-greening-biodiversity-net-gain-design-guide [Accessed March 10, 2022].

Appendix D – Engagement on Sustainability Framework

5.7. Introduction

Throughout the development of the Sustainability Framework several engagement activities were undertaken to assist with direction-setting and establishing key content. As part of this engagement a Sustainability Working Group (SWG) was established to provide regular support and act as a sounding board. The Sustainability Working Group consisted of several Environment Agency staff and representatives, and external representatives from the Port of London Authority (PLA) and the Royal Society for the Protection of Birds (RSPB). These individuals were:

Environment Agency

- Abby Crisostomo
- Andrew Irvine
- Anna Hewson
- Catherine Robaldo-Bishop
- Dave Cuthbertson
- Emily Smyth
- Jo Guy
- Laura Littleton
- Nadirah Hibatullah
- Sarah Smith
- Sophia-Harri Nicholaou
- Tony Coe

Port of London Authority (PLA)

- Veronica Chan

Royal Society for the Protection of Birds (RSPB)

- Mark Nowers

Additionally, the Thames Estuary 2100 Plan 10-Year Review Advisory Group, set up specifically to support the 10-Year Review, was also consulted throughout the development of the Sustainability Framework. The Advisory Group consisted of technical experts within flood risk management and, like the SWG, assisted with direction-setting and establishing key content with a broader perspective. The Advisory Group was composed of:

- **Chair - Baroness Brown of Cambridge, Julia King** *(chairs the UK committee of climate change adaptation committee)*
- Andy Bord, CEO at Flood Re
- Brendan Freeman, Climate Change Committee
- Charlie Wood, London Area Director at Environment Agency
- Dr Martin Hurst, Southern Regional Flood and Coastal Committee Chair
- Julie Foley, Director of FCRM Strategy & National Adaptation at Environment Agency
- Kathryn Brown, Director of Climate Change and Evidence at The Wildlife Trusts
- Paul Illingworth, Project Director at Infrastructure and Projects Authority
- Peter Daw, Head of Climate Change at Greater London Authority
- Samantha Kennedy, Director of Environment and Climate Action at Essex County Council
- Tanya Ferry *(deputising for Robin Mortimer, Chief Executive at Port of London Authority)*

The following sections outline the various engagement sessions that were held with both the Sustainability Working Group and the Advisory Group and outlines their key feedback from each of these sessions.

5.8. Sustainability Working Group (SWG) – July 2021 - Principles

The Sustainability Working Group (SWG), which at the time consisted only of the Environment Agency, were sent a draft copy of the Sustainability Framework principles, and asked to review.

In general, the feedback from the group outlined that the principles should be big and bold and should also include overarching sustainability concepts that would apply to everything that is implemented under the Plan. It was also suggested that the principles should align with partners' principles (like delivering against the UN SDGs) and that specific principles such as enabling green growth, achieving net zero, championing the Riverside Strategies, championing community resilience, preventing maladaptation, and delivering social values in an equitable way should be included.

5.9. Sustainability Working Group (SWG) – August 2021 – Sustainability Framework themes

A Sustainability Working Group (SWG) meeting was held on 6th August 2021. The group consisted of representatives the Environment Agency.

An updated draft Sustainability Framework principles based on previous comments from the SWG, along with a draft vision was presented at this meeting.

The identified sustainability themes that came from initial research of sustainability literature and which underpinned both the vision and principles was also presented. As the SWG had already reviewed and commented on the Sustainability Framework vision and principles, the meeting focused its discussion on the themes that underpinned them. The themes presented were the UN Sustainable Development Goals (SDGs), net zero and carbon management, climate resilience and adaptation, circular economy, social outcomes, biodiversity net gain (BNG) and natural capital, and governance.

Feedback from this meeting is presented below:

- It was outlined that the Riverside Strategy Approach (RSA) needed to be included within the themes, as well as the vision and principles.
- It was highlighted that social equality / outcomes for people needed to be looked at more in the themes.
- That the themes needed to align with the Environment Agency e:Mission ambitions.

Feedback was also provided after the meeting and is summarised below:

UN Sustainable Development Goals (SDGs)

It was suggested that rather than a standalone 'SDG' theme, the UN SDGs should be considered as overarching to the rest of the themes within the Sustainability Framework.

Carbon management

- As the bulk of carbon emissions within the Thames Estuary comes from the construction of flood defences and operation of defences, it was suggested that reducing carbon emissions should focus on the construction and operation phases. In relation to this the following carbon hierarchy was suggested:
    1. ***Reduce embodied carbon*** - Avoid activities that result in carbon (i.e., making asset management choices that prioritise smaller interventions, or extending life, or choosing nature-based solutions).
    2. ***Low carbon approaches*** - When we need to 'do something', employing low carbon approaches (lean design, low carbon specification).
    3. ***Reduce operational carbon*** – Reduce carbon from inspecting, maintaining, constructing, etc. (i.e., plant, transport, etc.).
    4. ***Incorporate renewable energy*** - Apply renewable energy generation to operation of assets or through generating surplus that can be utilised by others.
    5. ***Sequestration*** - Incorporate sequestration and blue carbon options where available, either to offset the above or to benefit others.
    6. ***Offset*** – Offset the remaining carbon emissions through schemes outside the estuary.

Climate resilience and adaptation

- It was suggested that climate resilience and adaptation should go beyond just resilient and adaptable flood risk management and should consider wider resilience and adaptability to climate change. For example, considering how nature recovery and delivering social outcomes can also be climate resilient and adaptable.

Circular economy

- When discussing waste reduction within the framework it was proposed to keep it at a strategic level, rather than discuss how specific waste might be addressed (such as plastic), and to focus on reducing waste through activities, such as not replacing assets just before they are raised or investing in solutions that last a longer time and/or have multiple purposes.

Social outcomes

- It was highlighted that the social outcomes theme was covering a combination of social outcomes and ways of working. It was suggested that this section solely focuses only on social outcomes and that ways of working were considered elsewhere in the sustainability framework.

Governance

- The view was that though governance is important, it could be covered by a blanket statement that outlines projects should follow sustainability standards. It was stressed that the whole framework influences governance and target setting for sustainability. Therefore, it was suggested to be removed as a 'theme' of the sustainability framework.

5.10. Sustainability Working Group (SWG) – September 2021 – Vision and principles

A Sustainability Working Group (SWG) meeting was held on 27th September 2021. The group at this time consisted of just the Environment Agency representatives.

In this meeting the structure of the Sustainability Framework was presented to the SWG (Figure 7). The structure outlined the components of the framework, along with the required inputs to aid the development of these components. The components of the framework included the sustainability vision and principles, sustainability goals and recommendations, and monitoring, evaluating, and reporting. It was outlined to the group that partner's sustainability drivers would not be fully understood until the review of recommendations, where all partners would be consulted, and thus only the vision, principles, goals, and recommendations would be taken to partners to review and agree. Once agreed with partners, and the Sustainability Framework had been updated to align with partner's sustainability drivers, then the monitoring, evaluating, and reporting component would be developed.

Additionally, the draft vision for the sustainability framework along with the updated principles, following previous consultation with the SWG, were presented.

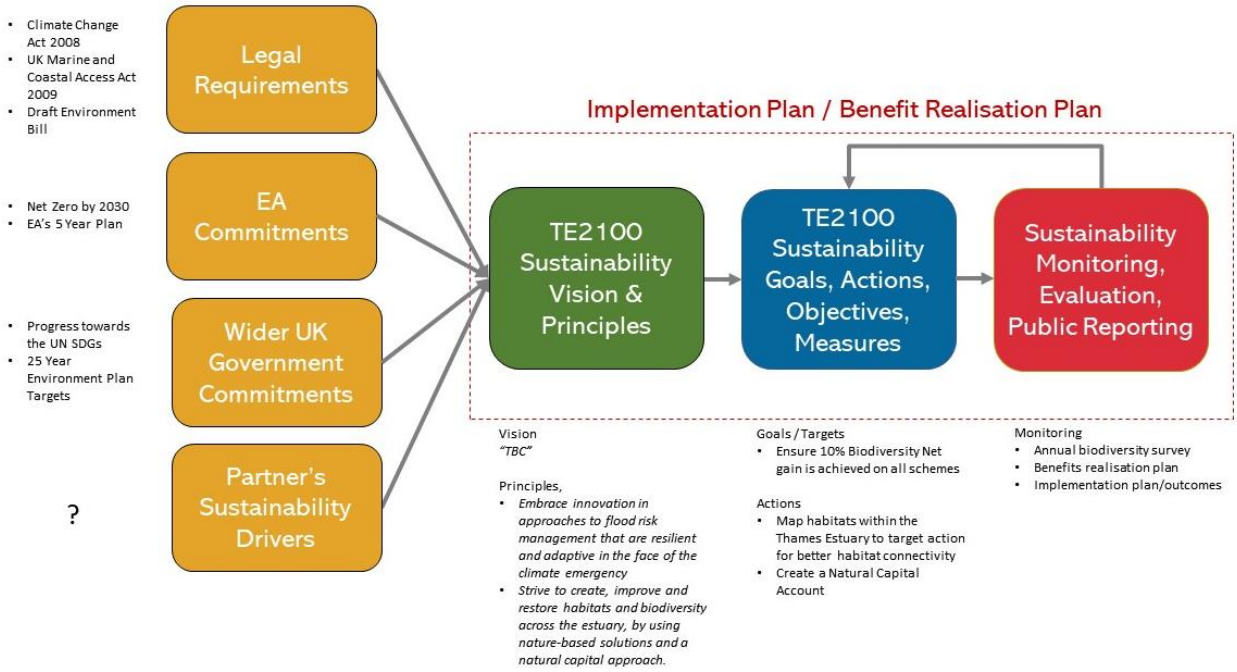

Figure 7. Diagram of the Sustainability Framework structure

Feedback from the group stressed that there is a need to distinguish the difference between *compliance* and *conformance* inputs within the diagram. It was noted that there are legal requirements (compliance) that the Sustainability Framework must follow, but there are also organisational commitments that work towards sustainable outcomes and are not legally binding (conformance). Therefore, the group suggested the diagram should clearly separate legislation from policy.

On the Sustainability Framework's vision, the SWG debated how to discuss 'growth'. How will this be translated into the future through this framework, thinking along the lines of 'allowing growth to happen', and is the vision going beyond this. There was also a request to ensure that social benefits are also included in the thinking for the vision.

For the updated principles, the group's feedback was that the offsetting ambition from net zero needed to be included within the principles. There was also consensus to split principles rather than group them together, such as having separate principles for net zero and circular economy. It was also highlighted that the principles felt more operational and therefore needed to be more about the '*what*' rather than the '*how*', and that the updated principles could have been applied to anything and needed to become more tailored to flood risk planning.

5.11. Advisory Group – October 2021 – Vision and principles

An Advisory Group meeting was held on 8th October 2021. The group consisted of the Environment Agency (EA), House of Lords, Flood Re, The Wildlife Trusts, Infrastructure and Project Authority, Climate Change Committee, Essex County Council, Greater London Authority (GLA), Port of London Authority (PLA), Southern Regional Flood and Coastal Committee. The first draft of the Sustainability Framework vision and principles were presented at this meeting, where the group were set the task of reviewing the vision and principles and to provide comment.

In the meeting the group suggested using more positive language in both the vision and principles. It was noted that social outcomes were not reflected strongly enough and suggested making the vision more visionary and the principles less EA-focussed, with the key being to make the sustainability framework adaptive.

After the meeting members of the group provided further feedback on the vision and principles of the Sustainability Framework. This feedback is outlined below:

5.11.1. Advisory Group feedback: The Baroness Brown of Cambridge, House of Lords

<u>Vision</u>
An approach to managing flood risk in the Thames Estuary which enables access, supports business, and delivers a river environment where people and nature can thrive.

<u>Principles</u>

1. Developing and implementing a world-leading adaptive management plan for flood risk, resilient to changes in climate, behaviour, and demographics.
2. With the UK Sustainable Development Goals at the heart of decision making and progress monitoring.
3. Improving the environment and enabling nature recovery across the estuary for current and future wildlife, increasing biodiversity as the climate changes.
4. Maximising the use of nature-based solutions and employing a natural capital approach.
5. Embedding the Riverside Strategy approach to enhance access to the river for all.
6. A science-based approach to net zero for asset management, new developments, and operations, using nature-based solutions such as tree planting and wetland creation for offsetting were essential.
7. Giving local communities a voice and integrating their visions into decision making.

8. Every step taken with key partners.
9. Embracing innovation and new ideas.
10. Making fairness, ethics and well-being fundamental considerations in all decision making.

5.11.2. Advisory Group feedback: Andy Bord, Flood Re

Vision

- Given the reasons stated in the paper for having a sustainability framework, the vision should clearly articulate how it will be achieved. Ideally linked to the SDGs and link to the 25 Year Environment plan (and beyond obviously!)
- Positive language need, e.g., 'Being responsive to' in place of 'without compromising'
- The key point is that being 'holistic' doesn't create a 'sustainable' outcome.

Principles

- Bringing together and aligning principles 1 (UN SDGs) and 3 (environmental net gain) to demonstrate that these are complementary and should therefore be considered alongside each other.
- Principles 5 (asset management) & 6 (circular economy) seem a bit contradictory (or at least, not wholly aligned). Principle 6 (circular economy) speaks of low or no carbon approaches but 5 (asset management) sets a lower bar of only seeking to optimise carbon reduction.

5.11.3. Advisory Group feedback: Paul Illingworth, Infrastructure & Project Authority (IPA)

The narrative behind the framework recognises the need to consider sustainability in the widest sense, the updated document has an almost exclusive environmental bias. While this is important and highly relevant to the [Thames Estuary 2100] strategy, being a flooding related strategy, it also provides an opportunity to deliver on other priority issues of sustainability such as health, jobs, skills, levelling up etc. These are all Government priorities and it's worth considering a strengthening of the link to Government beyond [the] UN SDGs and the 25-year environmental plan listed in the attached documents.

Below are links to the Government's Priority Outcomes from the last Spending Review (SR) and the Outcome Delivery Plans for all Depts, including Defra. These help[s] link to sustainability in a health, social and economic context. The Priority Outcomes will be updated following SR21 and following subsequent SRs, although I don't think the potential future movement in these outcomes should be a problem for an adaptive strategy like TE2100.

- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/944491/Provisional_priority_outcomes_and_metrics.pdf
- https://www.gov.uk/government/collections/outcome-delivery-plans

Additionally, the link below is to a tool the IPA has co-developed (the Programme Outcome Profile) to help with embedding these into programme and project development.

- https://www.gov.uk/government/publications/green-book-supplementary-guidance-projectprogramme-outcome-profile

5.12. Sustainability Working Group (SWG) - November – Sustainability questions

A Sustainability Working Group (SWG) meeting was held on 5th November 2021. The group expanded to not only consist of the Environment Agency (EA), but also included representatives from the Port of London Authority (PLA), and the Royal Society for the Protection of Birds (RSPB). A Miro mind map outlining '*What questions need to be asked in order to deliver sustainability across the lifetime of the Thames Estuary 2100 Plan'* was sent to the working group prior to the meeting for review.

The mind map, see Appendix E, was split into the following key areas:

- UN SDGs
- Climate change
- Natural capital (which was changed to 'nature recovery' post-meeting)
- Circular economy
- Carbon management
- Social outcomes
- Engagement

The mind map set out questions under each of these areas to address the overall question of '*What needs to be asked in order to deliver sustainability across the lifetime of the TE2100 Plan'*. The aim of the meeting was to review the questions under each of the key areas to outline what had been considered and to identify any gaps within the development of the Sustainability Framework.

During this meeting initial discussion was held around the sustainability priorities of the different organisations, especially the PLA and RSPB who had just joined the group. The PLA's priorities for addressing sustainability within the framework included decarbonisation, circular economy, net gain, social outcomes, and connectivity, whilst thinking about the new types of priorities required in the future. For the RSBP, their priorities were around the considerations being made for designated sites and it was noted that the goals around nature improvements (e.g., BNG, ENG, etc.) should be clear and not just touched upon. The RSBP stressed that designated sites cannot be included within biodiversity net gain (BNG) or environmental net gain (ENG) units. Priorities for the RSBP also included coastal protection of terrestrial and marine habitats and the impacts of roll back, losing habitats, or changing habitats due to sea level rise, as well as having reliable freshwater resources and better connectivity of habitat sites.

After the priorities of the PLA and RSBP were outlined to the group, EA attendees also stressed that the Sustainability Framework should address the EA's four ambitions on climate emergency, resource optimisation, community, and environment net gain. The group also discussed the need during this meeting, and in the further development of the Sustainability Framework, to consider how the goals will align with the principles of the framework and where crossover of opportunities or efficiencies between partners could be identified.

During the rest of this meeting only the UN SDGs, climate change and natural capital questions were discussed. The following was debated during the meeting:

UN SDGs

- The group agreed that the UN SDGs should act as an overarching theme to the Sustainability Framework and be used with partners as a common language to discuss sustainability.

Climate change

- The group highlighted that the questions for the framework needed to go beyond just how physical climate resilience will be addressed but also how social vulnerability and resilience will be considered in the framework.
- It was noted that adaptation and resilience were the key focus and that mitigation needed to be stressed more when developing the framework. Though it was proposed that mitigation could also be stressed under the carbon management element of the framework.
- There was also discussion around what are the wider benefits of addressing climate change (i.e., environmental benefits) and how the links between the different themes are emphasised in the framework.
- It was suggested that the Riverside Strategy Approach could be utilised to embed climate change ambitions into local plans and strategies and that the framework needed to highlight the thinking required for addressing space around defences, for their upgrading, nature enhancements, etc.
- Additionally, discussion was had on how the framework could approach engagement on habitat and land-use changes, as a result of adapting to sea level rise and increased fluvial flooding.

Natural capital

- The group agreed that the term ‘natural capital’ was too specific and narrow for the framework and thus was suggested to be changed to ‘nature recovery’ to be a more overarching and encompassing term.
- There was a lot of discussion around how the framework could help with the development of setting out an understanding on land management with partners and stakeholders within the estuary, with a strong emphasis on the need to work with landowners.
- The group also reiterated the need for this theme to stress that net gain (BNG and ENG) is separate under legal compliance within the framework and that mitigation to coastal squeeze should be stressed more.

5.13. Sustainability Working Group (SWG) – November – Sustainability questions continued

A follow-up Sustainability Working Group (SWG) meeting on the Sustainability Framework’s question mind map (Appendix E) was held on 19th November 2021. The group consisted of representatives from the Environment Agency (EA), the Port of London Authority (PLA), and the Royal Society for the Protection of Birds (RSPB). The group again reviewed the questions on the Miro mind map from the previous meeting, but focused on the areas of circular economy, carbon management, social outcomes, and engagement. The following was debated during the meeting:

Circular economy

- The group discussed the need for the Sustainability Framework to consider port growth, as more freight and passenger transport is expected. This growth will act as both an economic driver as well as an opportunity for supply chains to become more sustainable.
- It was added that consideration on how resource / beneficial use opportunities could be better identified and mapped across the estuary.
- How thinking differently about materials could help realise opportunities; and
- How to be pragmatic about regulating to enable and maximise opportunities.

Carbon management

- The group deliberated that the framework should initiate setting the scene for reporting on carbon to measure progress and the reporting structure to support this.
- There was also discussion on the need to establish a baseline for carbon management and aligning this with partner baselines and targets within the estuary.

Nature recovery

- Discussed that biodiversity net gain (biodiversity offsetting to a net gain level), is separate to ‘carbon offsetting’ (offsetting for carbon impacts) in terms of the guiding principles that sit behind them. Make sure the terms are not reduced to ‘offsetting’, so it is clear what type of ‘offsetting’ we mean.

Social outcomes

- The group debated how the framework should consider managing eco-anxiety and what is needed to support this, i.e., good engagement, as well as making a reference to mental health.
- That the framework needs to aid working towards establishing a baseline for monitoring social progress.
- It was suggested that social outcomes could be linked to the Riverside Strategy approach (i.e., using the river as a ‘cool’ place during increasing heat waves from climate change).
- The group highlighted that education should be included with employment within the framework.
- The group debated how the framework should help establish needs / contributions from people who aren’t part of employment.
- There was discussion on how to encourage SMEs to be sustainable. How can we enhance opportunity/ sustainability benefits through procurement etc.
- It was outlined that the framework first needs to help establish what partners mean by fair practice, before going into setting the right standards for it.
- The group agreed that procurement should be overarching when discussing ethics as it can enable all elements of sustainability.

Ethics, equality and wellbeing

- Suggestions that the ethics, equality, and wellbeing theme is not really a theme in the framework, but is an enabler of the framework and so it was suggested to remove it (but transpose relevant elements into the overarching aims for the framework and/or relevant aspects into social outcomes)

Engagement

- Discussion was held on strengthening language around collaboration and the sustainability outcomes that the framework aims to achieve.
- It was agreed by the group that this theme was more of an ‘enabler’ to sustainability than a theme of sustainability.

5.14. Sustainability Working Group (SWG) – February – Sustainability questions

A Sustainability Working Group (SWG) meeting was held on 1st February 2022 and 15th February 2022. In these two meetings, the group consisted of the Environment Agency (EA), the Port of London Authority (PLA), and the Royal Society for the Protection of Birds (RSPB). Prior to the meeting the group were sent the draft Sustainability Framework goals The goals were based under seven themes: climate change, carbon management, circular economy, nature recovery, social outcomes, an overarching theme, and an enabler theme

- Framework goals are good and struck a good tone and approach.
- PLA liked the education and training/skills aspects of the social outcomes.
- It was noted that the themes were separate and worked well, but all agreed they were also interdependent and that linking sentences could be used between the themes to identify some of the key linkages.
- Comments were mainly on rephrasing rather than changing content e.g., use the term 'transient users' for people moving through the area for trade or tourism - and to define what a 'community' and a 'stakeholder' is – it was agreed that a glossary would be developed to address emerging terms / terms open to interpretation).
- Suggested re-ordering to help emphasise the important goals under each theme. i.e., natural capital to be the first goal under nature recovery.
- Suggestions to change 'nature recovery' to 'nature emergency'.
- Making sure that the wording in the framework ties into the wording in the FCERM Strategy and EA2025 (i.e., including terms like 'levelling-up').
- Discussed further the goal around material health, soil, and land quality.
- The ongoing offsetting strategy was discussed, and it was suggested to tie this in with the sustainability framework.

5.15. Wider consultation in 2022

Throughout 2022 the Sustainability Framework, along with other products under the 10-Year Review, underwent further consultation and refinement. Figure 8 outlines the various stages throughout this consultation period. During these stages the content of the Sustainability Framework was presented to partners and sustainability outcomes were developed for the Plan. These were subsequently updated and refined from the feedback received during each stage of the consultation process, and the outputs from this process will form the updated Plan.

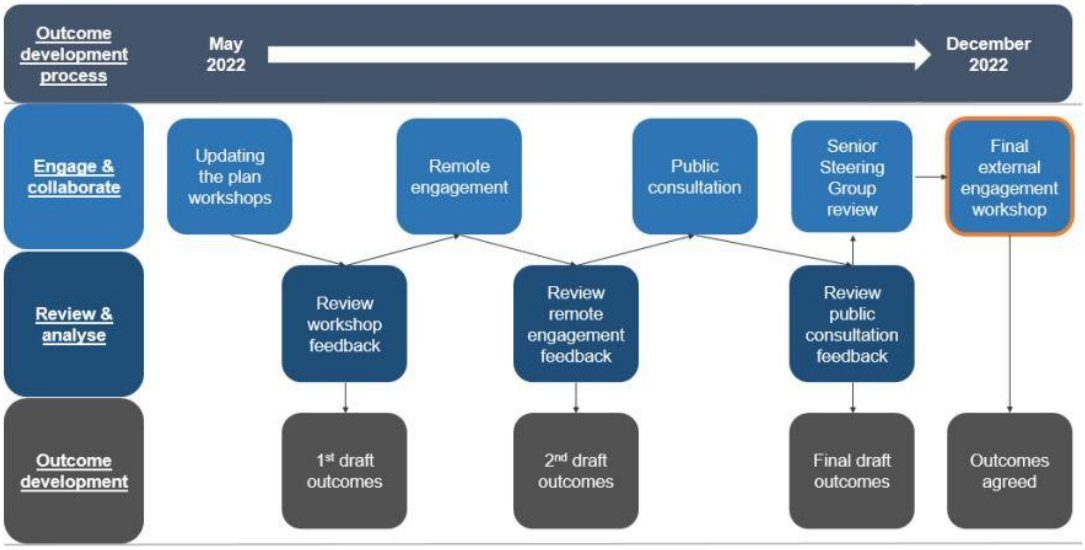

Figure 8. Consultation steps of the updated Plan's outcomes during 2022

Appendix E – Mind Map Exercise for the Sustainability Framework Goals

6.1. Question generating through mind map exercise

A sustainability mind map exercise was undertaken through a collaborative exercise with the Thames Estuary 2100 Sustainability Working Group (SWG). The aim of this mind mapping exercise was to raise questions on how The Plan could address delivering sustainability across the estuary.

The mind map was structured around eight themes that were derived from a combination of a review of current sustainability literature, follow-on engagement with sustainability managers, and flood coastal erosion risk management (FCERM) experts. These eight themes were:

- Climate emergency
- Carbon management
- Circular economy
- Nature emergency
- Social outcomes
- Ethics, equality & wellbeing
- Engagement
- UN Sustainability Development Goals (SDGs)

The Miroboard mind map used for this exercise is located here:
https://miro.com/app/board/o9J_lqTQvz8=/?share_link_id=679401730103

A visual representation of this Miroboard mind map is presented in Figure 9.

During this mind mapping exercise, the following was agreed:

- The theme of ethics, equality and wellbeing was split between the aspects that were relevant to the social outcomes and the aspects that were more relevant to the internal delivery team (e.g., Mind's Five Ways to Wellbeing, or easier return to work for women);
- the engagement theme would act as an 'enabler' theme to the other themes; and
- the UN SDGs would act as an overarching theme to the five key themes (climate emergency, carbon management, circular economy, nature emergency, and social outcomes).

The mind mapping exercise was designed to ask the key questions that we needed to know under each of these key sustainability themes.

The five key themes build a holistic picture of sustainability, each theme is interdependent with the other themes. All themes contribute to the climate and nature emergencies and each theme has social and community drivers. The following section outlines the links between all the themes, though these links are not exhaustive.

The narrative addressing each of these questions and associated outcomes (as part of the complete Sustainability Framework) was shared with the Sustainability Advisory Group and further consulted on with extensive public and partner engagement.

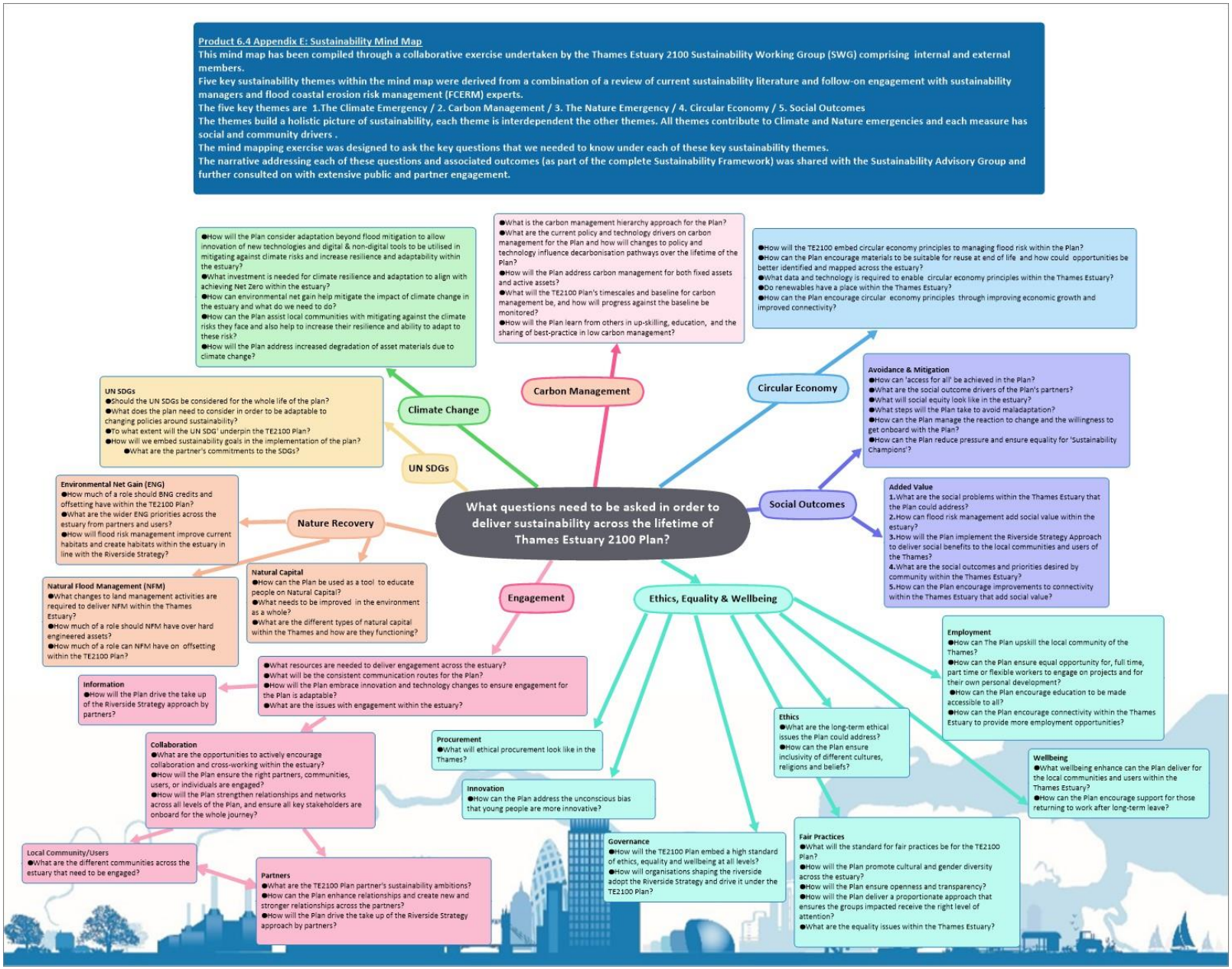

Figure 9. Diagram of the mind map that was created during the question raising exercise for the Sustainability Framework

6.2. Links between sustainability themes

6.2.1. Climate emergency

- **Carbon management**
    - Taking a net zero approach helps improve resilience to the impacts of climate change through mitigation and adaptation actions, such as implementing low-carbon nature-based solutions (e.g., climate induced flooding, temperature increases, etc.), undertaking strategic carbon offsetting through climate resilient species, providing renewable sources of energy, and through the avoidance / reduction of emissions that enable sustainable living.
- **Circular economy**
    - Taking a circular economy approach helps to bolster resilience to the impacts of climate change (e.g., providing energy security through renewable sources of energy, introduce sustainable trading systems, bolster natural resource availability, and improve socio-ecological function through nature regeneration).
- **Nature emergency**
    - Using nature-based solutions and habitat restoration / creation / enhancement helps to reduce climate induced hazards (e.g., sea level rise, storm surges, flood events, heat stress, drought, saline intrusion) and improve the resilience of communities to recover from the effects of climate change.
- **Social outcomes**
    - Improving social value and equity helps people predict, prepare, mitigate and adapt to the impacts of climate change and reduces community vulnerability through improved social cohesion and function (e.g. improving access to resilient natural spaces (e.g. cooling, heating, flooding, drought, away from fumes and noise in cities) , provide accessible pathways (e.g. improve links in local areas to better prepare or response through better collaboration, escaping climate induced hazards, or linking up deprived areas to share resources), providing climate shelters, and integrated stopping / resting places, enable citizen scientists to monitor hazards and use open-data, improve job opportunities for all).

6.2.2. Carbon management

- **Climate emergency**
    - Addressing the climate emergency helps achieve a carbon net zero approach, by enabling nature-based solutions and/or technological / engineering / data solutions that not only bolster the resilience of communities but also reduce carbon, either through sequestration / capture / storage, which would otherwise be emitted from unmitigated hazards.
- **Circular economy**
    - Taking a circular economy approach reduces waste and emissions production, energy consumption and new resource inputs (with higher embodied carbon), which together reduce the release of carbon and other greenhouse gases into the atmosphere, whilst at the same time promoting renewable sources of energy and enabling nature and soils regeneration to biologically sequester carbon.
- **Nature emergency**
    - Using nature-based solutions and/or enhancing, regenerating, or creating habitats and biodiversity, as well as undertaking biodiversity and carbon offsetting for any unavoidable impacts from development, enables the reduction of greenhouse gases and the biological sequestration of carbon.

- **Social outcomes**
    - Improving social value and equity in communities helps achieve a net zero approach by involving communities in creating new blue/green/recreational/educational spaces that sequester carbon. Also, improving access to green jobs (e.g., in renewables, low-carbon circular supply chains etc.) and consulting with creative community thinkers and citizen scientists, enables communities to innovate low-carbon solutions, monitor carbon changes and operate a more sustainable economy.

6.2.3. Circular economy

- **Climate emergency**
    - Addressing the climate emergency to bolster resilience to the impacts of climate change supports a circular economy approach through activities such as nature regeneration, restoring natural capital asset stocks, improving resource availability, undertaking nature-based solutions, improving energy security through renewable sources, using technology, data, and innovation, and providing access to green jobs.
- **Carbon management**
    - By taking a net zero approach, we encourage activities and processes such as low-carbon procurement from sustainable, circular suppliers and introducing new low-carbon innovations / materials / technologies that keep resources in a circular economy for longer (with lower embodied carbon) and produce less emissions and waste. We also support carbon sequestration through nature regeneration and renewable sources of energy that underpin the circular economy.
- **Nature emergency**
    - By addressing the nature emergency, we can mitigate the impacts on, and improve, habitats and biodiversity through a circular economy. For instance, by reducing reliance on new resource inputs by safeguarding natural capital asset stocks and natural systems through nature regeneration, promoting sustainable and circular procurement and supply and by circulating in-use materials at their highest value for longer.
- **Social outcomes**
    - Aiding social value and equity in communities through circular economy initiatives helps to create green jobs, regenerate habitats and biodiversity, bolster health and wellbeing (e.g., through blue/green/recreational/cultural/educational space), diversify sustainable supply chains, and upskill communities in sustainable practises and new green markets. A circular economy approach will also reduce waste and emissions production in communities (improve air, land, and water quality), improve natural resource availability, and provide renewable sources of energy for communities.

6.2.4. Nature emergency

- **Climate emergency**
    - Using resilient nature-based solutions and strategic habitat restoration / creation / enhancement to address the impacts of climate change (e.g. species tolerant to heat, drought, freshwater and saline intrusion and/or species integrity, distribution and connectivity, land use adaptation) will help address the nature emergency and bolster community resilience, whilst ensuring that people, habitats, and biodiversity remain future-facing to the impacts of climate change, and biodiversity remain future-facing to the impacts of climate change.

- **Carbon management**
    - Taking a carbon reduction management approach enables low carbon initiatives such as nature-based solutions, bioengineering and green infrastructure (i.e. sponge cities) and encourages the development of carbon offsetting schemes that biologically sequester red carbon (i.e. trees, pollinator parks, soils, saltmarsh, seagrass, wetlands, and peatland etc.), as appropriate.
- **Circular economy**
    - Taking a circular economy approach enables the regeneration of nature, but also reduces the impact on nature through sustainable procurement suppliers, and by encouraging product inputs to be kept circulating in use, at their highest value for as long as possible. Where inputs are at end of life, healthy or remediated outputs can potentially be used to regenerate natural systems again (as appropriate).
- **Social outcomes**
    - Aiding replenishment of natural capital stocks that support eco-system services, which provides multiple socio-environmental and socio-economic benefits for all people, helps to recover nature, and involves communities in local restoration and monitoring (citizen science) processes. Providing access to higher value, green/conservation jobs and encouraging diverse, sustainable procurement also helps to sustain and recover nature.

6.2.5. Social outcomes

- **Climate emergency**
    - Aiding communities to become more resilient to the impacts of climate change and to reduce community vulnerability by improving community cohesion, integration and function and enabling communities to live sustainably (e.g. through nature-based solutions and/or logistical, engineering, and technological solutions, or by increasing access to resilient blue and green space or providing equitable access to training and upskilling).
- **Carbon management**
    - Adapting social infrastructure to use less whole-life carbon; through strategic planning and design, by integrating better cycle pathways and pedestrian areas, and providing habitat creation and restoration initiatives for use by people and wildlife, which not only emit less carbon but also sequester carbon (e.g. green and blue space, nature-based solutions, green infrastructure). Enabling communities to monitor changes in carbon and airborne emissions through citizen science and to share creative viewpoints on low-carbon innovations.
- **Circular economy**
    - Implementing a circular economy approach helps bolster social systems, such as through sustainable job creation, regeneration of nature for wellbeing and enjoyment, improved availability of natural asset resource stocks, access to renewable sources of energy and access to more diverse, sustainable supply chains. The sharing of circular economy innovations, case studies and data in open-data platforms will be key to creating, and sustaining, new circular economy markets in the community.
- **Nature emergency**
    - Taking a proactive approach to local nature recovery that enables all communities to have equitable access to place-appropriate blue and green space, which enables social cohesion and integration, bolsters health and wellbeing and provides resilient ecosystem services for all people to use (i.e., improved air, water, land quality, shelter from hazards, access to recreation / educational / cultural space), whilst restoring biodiversity and habitats locally to address the nature emergency. Communities take ownership of the safe and inviting spaces

they help create and are involved in contributing creative ideas / monitoring changes, through citizen science and inclusive consultation.

6.2.6. UN Sustainable Development Goals

Error! Reference source not found. presents a summary of the links between the UN SDGs a nd the Sustainability Framework Themes. Note that the table focuses on the primary / direct links between the themes and SDGs, and it is acknowledged that the themes can indirectly contribute towards the SDGs.

Table 7. Links between the UN Sustainable Development Goals and the Sustainability Framework Themes

* Additionally, each theme contributes to some extent to Zero Hunger (2) through resilient nature and soils recovery and food security, and to (1) No Poverty through green jobs, partnerships, technologies, data providers and innovations.

	Sustainability Framework Theme				
	Climate Emergency	**Carbon Management**	**Circular Economy**	**Nature Emergency**	**Social Outcomes**
01 No Poverty	X*	X*	X*	X*	X*
02 Zero Hunger	X*	X*	X*	X*	X*
03 Good Health and Wellbeing	X	X	X	X	X
04 Quality Education					X
05 Gender Equality					X
06 Clean Water and Sanitation	X	X	X	X	X
07 Affordable and Clean Energy		X	X		X
08 Decent Work and Economic Growth		X	X	X	X
09 Industry, Innovation, and Infrastructure	X	X	X	X	X
10 Reduce Inequalities	X		X	X	X
11 Sustainable Cities and Communities	X	X	X	X	X
12 Responsible Consumption and Production		X	X		X
13 Climate Action	X	X	X	X	X
14 Life Below Water	X	X	X	X	X
15 Life on Land	X	X	X	X	X
16 Peace, Justice, and Strong Institutions	X				X
17 Partnerships for the Goals	X	X	X	X	X

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Historic England

Planning Policy
Planning Service
Medway Council
Gun Wharf, Dock Road
Chatham, Kent ME4 4TR

By email only futuremedway@medway.gov.uk

Our ref: PL00794024
Your ref:

Telephone [redacted]
Email [redacted]

Date 6 September 2024

Dear Sir or Madam

Medway draft Local Plan 2041 Regulation 18 Consultation 2024

Thank you for your email of 12 July 2024 inviting comments on the above consultation document.

Introduction

As the Government's adviser on the historic environment Historic England is keen to ensure that the protection of the historic environment is fully taken into account at all stages of the planning process. This includes formulation of local development policy and plans, supplementary planning documents, area and site proposals, and the on-going review of policies and plans.

There are many issues and matters in the consultation document that are beyond the remit and concern of Historic England and our comments are, as required, limited to matters relating to the historic environment and heritage assets. We note that as an early stage in the formulation of a local plan the current document may be subject to significant change and consequently we consider it appropriate to limit our comments to more general matters; we will comment more specifically and in detail at later stages in the plan making process as appropriate. In this respect, you should not take the comments below as the definitive view of Historic England on the matters contained in the plan; they are provided for general guidance in the iterative process of preparing appropriate policies for the historic environment.

General Comments on the Draft Medway Local Plan 2041

We note that a number of the comments made by Historic England in our representations on the previous consultation on the draft Medway Plan (by letter dated 3 October 2023) have been addressed in the revised draft plan. We broadly welcome these changes.

While the comments in our earlier letter remain the basis of our position on the current draft plan, particularly in highlighting the outstanding historic environment characteristics of much of Medway, we are satisfied that heritage is now better reflected in the plan. We note below some opportunities where we think these references may be strengthened or reinforced.

Specific Comments on the Draft Medway Local Plan 2041

Policy T1, Promoting High Quality Design: Historic England very much welcome the Council's ambition for high quality design in Medway and the detailed proposed policy that accompanies this. We also welcome reference to the role the historic environment can play in delivering high quality design (noted in the preamble to the policy).

Policy S9 Historic Environment: Historic England supports the Council's ambition, as outlined in this policy, to deliver objectives in the Medway Heritage Strategy. However, we note that this document does not appear to have been adopted and if reference is made to it in the policy, we suggest it would be beneficial to update and adopt the strategy.

We also welcome reference to a local heritage at risk register in this policy, but again note that this is not currently in place in Medway. It would therefore be beneficial to explore how a local heritage at risk register could be developed to support the on-going management of Medway's historic environment.

Policy DM9 – Heritage Assets: Historic England is pleased to see that the preamble of this policy recognises the central role that heritage can play in good place making.

This policy echoes some of the text in the NPPF for designated heritage assets but extends these to all heritage assets as far as we can see. This means that the tests for 'total loss of' or 'substantial harm to' would apply to undesignated heritage assets and designated heritage assets equally as the policy is currently worded.

While strong policies for undesignated heritage is a positive thing on the one hand, from a practical perspective, you may wish to consider how this policy would be applied in future development advice work. We would be pleased to discuss the detailed wording of this policy with you, if helpful.

Policy S9 Star Hill to Sun Pier: Historic England welcomes the inclusion of a policy focussed on the Star Hill to Sun Pier area which recently received a Historic England grant to support the area's ongoing regeneration. Recognition of the area's special qualities and its unique contribution to Medway's historic environment is especially welcomed by Historic England, and we support the Council's ambition to re-establish the area as a cultural, social and retail quarter as noted in the preamble.

The adoption of a Supplementary Planning Document for the area was a positive outcome of the recent Historic England grant-aided work in the area. This policy, which notes that development will be supported when in accordance with the adopted document, is therefore strongly supported by Historic England.

Historic England notes that there is no historic green space policy, but that Medway has a rich variety of green spaces many of which are intrinsically linked to the area's unique historic character, such as the former fields of fire for its many former defensive structures. Historic England would encourage the Council to include a policy for the protection of this heritage asset type.

Historic England concurs with the comments of Kent County Council Heritage Team about archaeology. We suggest the Council takes on board the County Council's views on the wording of the archaeology policy.

Evidence Base

As the Local Plan is developed, Historic England suggests any decisions should be based on a thorough understanding of the area's historic resource and a positive strategy to conserve and enhance that resource. A draft heritage strategy from 2017 may be one such resource that the Council could call on to inform future iterations of the l

ocal plan. We note, however, that it may now be out of date, and therefore it may be necessary to do further work to ensure that the Council has a sufficiently robust, up-to-date heritage focussed evidence base moving forward. We would be pleased to discuss revisions to the existing unadopted heritage strategy if helpful.

Summary

In summary, Historic England welcome the inclusion of policies for the historic environment in the local plan that meet the obligation for preparing the positive strategy required by the NPPF (paragraphs 20 d) and 190). This, along with the requirement for a robust and up-to-date evidence base, will be key tests of the soundness of the plan and the achievement of sustainable development as defined in paragraphs 8 and 11 of the NPPF when it is subject to examination.

We should like to stress that this opinion is based on the information provided by the Council in its consultation. To avoid any doubt, this does not affect our obligation to provide further advice and, potentially, object to specific proposals which may subsequently arise where we consider that these would have an adverse effect upon the historic environment. We hope that these comments are useful.

Yours sincerely

Alan Byrne
Historic Environment Planning Adviser

Network Rail
1 Puddle Dock
London
EC4V 3DS
E [redacted]

Via email: futuremedway@medway.gov.uk

08 September 2024

Dear Planning,

NETWORK RAIL RESPONSE TO MEDWAY COUNCIL LOCAL PLAN (REGULATION 18) CONSULTATION

Thank you for providing Network Rail the opportunity to make comment on the Regulation 18 version of the Medway Local Plan.

It is important that opportunities to promote the use of the railway as a more sustainable modes of transport are identified and taken forward. The railway network is a vital element of the country's economy and a key component in the drive to deliver the Government's sustainable agenda.

Network Rail is the statutory undertaker for maintaining and operating railway infrastructure of England, Scotland, and Wales. As statutory undertaker, Network Rail is under license from the Department for Transport (DfT) and Transport Scotland (TS) and regulated by the Office of Rail and Road (ORR) to maintain and enhance the operational railway and its assets, ensuring the provision of a safe operational railway. As a matter of course, proponents of sites which are close to the railway boundary or sites which could affect the railway asset directly are required to engage with our Asset Protection and Optimisation team (ASPRO).

Network Rail has comments which we hope are of use to the Council and are keen to assist where possible to deliver these. As identified within the literature supporting the consultation, Medway have a substantial housing need to be met over the Plan period. Given the outline of the standard methodology, it is incumbent on Medway to seek to meet this identified need as far as possible. This requires the Council to 'leave no stone

unturned' in seeking to identify opportunities for housing and is clearly a key challenge and priority for the new Local Plan.

One of the most sustainable locations for housing provision is around transport nodes, such as railway stations, and the Council should give due consideration to these opportunities. Network Rail can support the Council on this should this assistance be sought. Additionally, it is vital that the transport infrastructure required to support the level of growth that Medway are required to meet is fully considered and is identified as a key priority for the Plan.

Rail network in Medway

The stations at Strood, Rochester, Chatham and Gillingham provide excellent connectivity between these Medway towns. The connectivity also provides access into London, either to London Bridge or to Abbey Wood through the Elizabeth Line. There are clear opportunities to enhance rail connections on the Hoo Peninsula. Should Medway pursue the level of housing delivery that has been set out for the Hoo Peninsula in the consultation documents, then the highlighted new passenger route and station will need to be fully funded by third parties. Network Rail is supportive of the safeguarding of the Grain Branch line and the possible location for a new station at Sharnal Street.

Development Growth

Network Rail notes the possible development locations that the Council have included to support the consultation. The Council presents three growth options, with SGO3 – Blended strategy, being the Council's preferred option. Network Rail present no preference on a growth strategy however we comment that sites focused on brownfield, near public transport hubs, provide the most sustainable approach to growth.

Where substantial development is proposed, a joined-up approach to an effective transport strategy is required to ensure development is connected to make it sustainable. Should the Council pursue SGO2 or SGO3, then a clear plan for how vehicle traffic will be managed, and where possible public transport options promoted. Network Rail remains keen to work with the Council on how best to support the chosen growth strategy. This includes discussions over opportunities to improve existing rail stations to support development nearby. Station improvements should form part of any draft site allocations where this is triggered.

Further work will be required to determine locations of site allocations and how development is best connected. Network Rail will also need to understand the impacts of the site allocations on the railway, station capacity and any level crossings that are engaged.

Alongside this, Network Rail has promoted two station car parks at Chatham and Gillingham stations which are available for development opportunities. These sites are in the most sustainable locations, being in town centres and adjacent to mainline rail stations. The Chatham car park site forms part of FP19 in the land availability assessment and the Gillingham car park site is GS30. These sites can also sustain a high density and are available within the first 5 years of the Plan. It is Network Rail's view that both of these site should be allocated in the new Local Plan as they are available and deliverable.

Network Rail note previous discussions around re-aligning the bus services and road network around Chatham station to provide a combined transport interchange. The proposed re-development of the Chatham station car park would not prejudice the combined interchange from coming forward should the Council remain committed to

bringing this forward. Additionally, Network Rail also notes the Chatham Design Code has been recently adopted. Network Rail wish to continue the positive discussions with the Council to develop an effective transport strategy and contribute to the delivery of homes to support the Council meeting its housing need.

There are a significant number of level crossings within Medway, many of which are located on the Hoo Peninsula. Should the Council pursue development opportunities that increases the interaction of members of the public with level crossing on the rail network, then closure or mitigation of such crossings should be a consideration within the new Plan. This would not block development but would need to be identified as an important consideration when developing site allocations or taking a decision on planning applications. Network Rail suggest that this would take the form of inclusion of a specific Policy focused on level crossing safety and mitigations as required arising from development or inclusion of this within a relevant Policy, within the Plan.

As the experts in rail safety, Network Rail would be able to support the Council in developing an effective approach which ensures the safety of residents and other users without compromising the safe and efficient running of the railway.

Additionally, in developing site allocations that may interact with the railway, it is important to ensure railway track access remains through agreements with landowners and within masterplans or any supporting information to the allocations. Engagement with Network Rail's property team is required on this matter and can support the Council on this as the Plan develops.

Policy DM15: Monitoring and Management of Development

Network Rail supports the pooling of developer contribution to fund transport mitigations to support growth. The use of Grampian-style conditions to secure the funding and delivery of infrastructure required as part of the phasing of development is also supported. This is essential in ensuring there is no shortfall in infrastructure funding or provision and in most cases full funding of this will be required. Network Rail will continue to keep the Infrastructure Delivery Plan up-to-date and work with the Council over the type of infrastructure needed to support growth.

Policy DM18: Transport Assessments, Transport Statements and Travel Plans

The rail network must be considered when assessing potential development sites, either for allocation or during the determination of a planning application. This is in much the same way as an assessment would take place in consultation with National Highways. Engagement with Network Rail as part of any Transport Assessment/Statement/Travel Plan is necessary and reference to this should be included within the draft Policy.

Network Rail are also monitoring the progress and impacts of the Lower Thames Crossing DCO. This has the potential to conflict with promoting sustainable transport opportunities in relation to removing vehicles from the road and discouraging a modal shift.

Summary

The rail network within Medway provides an excellent basis to pursue development opportunities and to promote sustainable transport as a genuine alternative to using the car. Additionally, Network Rail would encourage Medway to include the rail network as a key priority/opportunity within the new Local Plan and to develop policies and site allocations which promotes the rail network in encouraging its usage and pursue development opportunities.

Network Rail are keen to continue to work with the Council and other stakeholders in helping to deliver transport and infrastructure improvements for the benefit of residents of Medway.

I trust the above is of use and if there any issues raised that needs further discussion then please do not hesitate to contact me.

Kind regards,

Craig Hatton MRTPI
Senior Town Planner

TONBRIDGE & MALLING BOROUGH COUNCIL

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[redacted] [redacted]
[redacted] [redacted]

Your ref.
Our ref.
Date 19/08/2024

Dear [redacted]

Re: Medway Council Local Plan Regulation 18 Consultation: Response on behalf of Tonbridge and Malling Borough Council (TMBC)

1. Thank you for consulting Tonbridge and Malling Borough Council (TMBC) on the Regulation 18 Local Plan. Having considered the document, we wish to make the following comments.

   Housing

2. TMBC note that Medway Council (MC) is planning for an identified housing need for 1,658 homes a year, over the plan period to 2041 using the previous government's standard method. Clarification is sought of the base date of the plan, and the net need over the plan period taking into account all sources of supply.

3. TMBC note that this consultation commenced prior to the proposed revision of the standard method for calculating housing need as set out in the Government's consultation National Planning Policy Framework (NPPF). Clarification is sough from MC on the potential impact on revised housing numbers and programme timeframes that may result from the publication of a revised NPPF later this year and the proposed transitional arrangements put forward as part of the NPPF and planning reform consultation.

4. TMBC welcomes MC's in-principle commitment at this stage to seek to make provision for Medway's development needs over the plan period. TMBC supports MC's preferred strategy of SGO 3 (Blended Strategy) to meet the development needs, due it's 'brownfield first' approach whilst providing a range of housing choice.

5. TMBC would also welcome clarity on the precise potential quantum of growth that would be delivered through SGO 3, as well as information on potential yields of sites identified in the Policies Map. This would enable detailed consideration of potential cross-boundary issues such as, for example, the impacts of growth on the local highway network and the consequential impacts on local communities.

6. The TMBC response to the previous Regulation 18 consultation in Autumn 2023 noted a request to Medway Council from Gravesham Borough Council, to consider if there is capacity to provide up to an additional 2,000 homes to help meet Gravesham's housing needs. TMBC would welcome clarity on whether this request remains and if it has been accommodated within this Regulation 18 Local Plan.

7. We note that para 6.10.7 identifies a need for 31 pitches for gypsy and travellers and three plots for Travelling Showpeople, and Policy T10 sets out the approach to meeting this need through protection of and expansion of existing sites and permitting new sites subject to meeting the criteria set out in the policy. TMBC seek clarification on whether this approach will yield sufficient pitches and plots to meet the identified need.

Employment

8. We note that the employment needs over the plan period have yet to be established. Policy S10 identifies that this will be determined by the latest employment needs assessment when published. TMBC would welcome clarity on when the employment needs will be known, and questions how a commitment to meet development needs can be made at this stage when the full need is yet to be established.

Sites

9. Within the document, two sites are identified that have potential cross-boundary implications for Tonbridge and Malling, both at Rochester Airport and both identified for employment uses.

10. The northern site at Rochester Airport spans the borough boundary and identifies land within Tonbridge and Malling. This site has not previously been promoted to TMBC through our Call for Sites exercises. However, both sites appear to be within the site of Innovation Park Medway which is to be delivered in accordance with the terms of the Local Development Order (LDO). TMBC are happy to continue to engage in cross-boundary discussions regarding these sites.

Other comments

11. In addition to the points set out above, TMBC wish to make the following observations:

- The file size of the PDF Policies Maps that form part of the consultation are very large, and therefore are difficult to view and interrogate, and site numbers are difficult to read.
- It is not clear from the Sustainability Appraisal what, if any, reasonable alternative policy approaches e.g. levels of affordable housing have been considered during plan preparation.
- The North Downs Woodland appears to be missing from Table 3.6 of the Habitat Regulations Assessment.

12. I hope these comments are of assistance and I can confirm that TMBC looks forward to continuing to engage with MC on plan-making matters in a constructive, active and on an on-going basis.

Yours sincerely,

Jenny Knowles
Principal Planning Policy Officer
Tonbridge and Malling Borough Council

Medway Local Plan Regulation 18 Consultation.
Kent County Council Response (September 2024)

Policy/Paragraph	Commentary
Kent County Council (hereafter referred to as the County Council) appreciates the challenges that exist within Medway in respect of meeting the housing requirement and delivering the necessary infrastructure that will be required to support this growth. The County Council supports the commitment to delivering a Local Plan in Medway, which will allow for joint working to ensure a sustainable future for Kent and Medway. The County Council notes that this consultation follows on from the previous Regulation 18 consultation, to which the County Council provided a response on 31 October 2023. The County Council is committed to working with Medway Council and other key stakeholders to ensure that sustainable growth is delivered to meet the identified housing need, supported by necessary infrastructure – that is planned for, funded and delivered in a timely manner, ahead of housing / commercial growth where required. The County Council therefore welcomes the recognition within the Local Plan of the need for mitigation measures and infrastructure to be delivered to support growth. To deliver sustainable development within Medway, close working and a collaborative approach with all key stakeholders will be crucial – taking in to account all necessary infrastructure and services required to deliver robust and resilient communities during the plan period and beyond– whilst also considering any cross boundary and strategic implications of growth. The County Council welcomes being a part of this collaborative approach. As the Local Plan progresses, the County Council would value timely engagement in the shaping and inputting, as appropriate, into the draft Statement of Common Ground to ensure that all cross-boundary and strategic matters are properly and clearly addressed.	
Introduction	
Chapter 2 Vision and Spatial Objectives	
General Commentary	Highways and Transportation The County Council, as Local Highway Authority for Kent, considers that the consultation document provides a useful summary of the issues and challenges facing Medway in developing a local plan. Heritage Conservation The County Council wishes to draw attention to several key studies and resources that the County Council would recommend underpin any consideration and use of Medway's historic environment: • Kent Historic Environment Record - a database of archaeological sites, historic buildings and landscape features in Kent and Medway. • The outputs of the Hoo Peninsula Historic Landscape Project – a major project carried out by Historic England from 2009 – 2012 that examined all aspects of the peninsula's heritage. • Historic town survey reports for Chatham, Rochester and Gillingham (2004) - these reviewed the known archaeological and built heritage of the three towns and identified Urban Archaeological Zones of sensitivity. • Kent Farmsteads Guidance (2012) for developers and planners considering development in the countryside. • Kent Historic Landscape Characterisation (2001) • Kent Gardens Trust survey reports for gardens and green spaces in Medway.
2.1 Vision for Medway	Highways and Transportation The County Council, as Local Highway Authority for Kent, considers that the Vision for 2041 is clearly defined and that the ongoing work whereby all potential development sites will have been assessed for their ability to deliver sustainable development will contribute to the necessary evidence-based decision-taking process. Heritage Conservation The County Council is pleased to see the commitment to Medway's rich heritage in the first paragraph of the Vision but would suggest it could perhaps be reworded to "*The plan's vision is to strengthen Medway's position in the economy and culture of the region, connected to its surrounding coast and countryside, and ~~its rich heritage~~ and displaying its rich heritage*". In respect of the commitment *"By 2040, Medway is responding and adapting to climate change, providing for more sustainable and resilient development."* Climate change will provide a major challenge for the management of Medway's heritage. Many of Medway's heritage assets are coastal and are directly threatened by rising sea levels. Examples include the prehistoric, Roman and

Policy/Paragraph	Commentary
	medieval salterns of the marshes of the Hoo Peninsula, Roman pottery-making sites visible in the foreshore and the fortifications of Grain, Cockham Wood Fort, Slough Fort, Hoo and Darnet Forts and the Historic Dockyard. Changing moisture levels in the soil will impact on archaeological remains which are susceptible to drying/wetting and erosion, and historic buildings will be challenged by increased wind and storms. The County Council suggests that it may be helpful if the Council could include in its action plans a survey of Medway's heritage and the likely impact of climate change so that managers can assess risk and identify any remedial actions. The County Council also agrees with the goal "*Medway has secured the best of its intrinsic heritage and landscapes alongside high-quality development to strengthen the area's distinctive character… Important wildlife and heritage assets are protected and enhanced".*. The County Council considers that key to this will be ensuring that the Medway Heritage Strategy is fully integrated into relevant decision-making, design and master planning for development proposals as well as blue and green infrastructure projects.
2.2. Strategic Objectives	Heritage Conservation The County Council is surprised that there are no strategic objectives that relate specifically to Medway's environment. The environment is central to whether Medway is a good place to live in and visit, with clear consequences for health and wellbeing, strength of local economy and quality of design. The County Council would recommend that a specific objective be included that includes securing Medway's high-quality environment for future generations, in all its forms including the historic environment. *Prepared for a sustainable and green future* The historic environment has a significant role to play in the conservation of resources required for development, and also in energy efficiency. Old buildings can often be more energy efficient than newer ones and of course have already been built. Thus, it may take fewer overall resources to adapt an old building than to demolish it and build a completely new one. Historic England has produced a range of guidance on the role that heritage can play in mitigating climate change and historic building adaptation ('Climate Change Adaptation Report' (Historic England, 2022)). The guidance demonstrates that historic structures, settlements and landscapes can in fact be more resilient in the face of climate change, and more energy efficient, than more modern structures and settlements. This has also been updated in the Historic England report 'There's no Place Like Old Homes: re-use and Recycle to Reduce Carbon' (Historic England 2019). This could usefully be highlighted in the text which at present, rather suggests the brunt of making housing energy efficient must only be borne only by new buildings. *Supporting people to lead healthy lives and strengthening our communities* Heritage makes an important contribution to health. Historic England has released research that the County Council recommends is considered in the production of this Local Plan. The research demonstrates how heritage actively supports health and well-being through contributing to a generally more attractive environment, allowing activities that encourage participation and inclusion and by encouraging outdoors activities - Wellbeing and the Historic Environment | Historic England.
Chapter 3 Spatial Growth Options	
General Commentary	The County Council is supportive of the steps made by Medway Council to positively plan for growth in Medway. It is appreciated that a blend of approaches may need to be taken to be able to meet the housing requirement in a sustainable and resilient manner. With any growth option progressed by Medway Council, the County Council would welcome ongoing dialogue to address any cross boundary matters and ensure necessary infrastructure provision is secured and delivered to support new and existing communities in Kent and Medway. Highways and Transportation Given the constraints in the transport network surrounding Medway and the opportunities offered to create sustainable developments building on the existing network of footways, cycleways and public transport services, the County Council**, as Local Highway Authority for Kent**, does consider that an urban regeneration focused development strategy in Spatial Growth Option 1 would best meet the vision. Spatial Growth Option 1 would provide the greatest opportunities to achieve sustainable travel due to the higher density and critical mass required to fund high quality facilities and long-term bus use. Spatial Growth Option 3, would provide this to some extent, but to a lesser degree and Spatial Growth Option 2 is unlikely to be able to achieve this. Appreciating the plan will also likely need to contain a mix of other sites in suburban and rural areas as set out in Spatial Growth Option 3, the County Council looks forward to further close working with Medway as the plan is progressed, including scenario testing and identification of potential impacts and mitigations utilising the Kent Transport Model.

Policy/Paragraph	Commentary
	Heritage Conservation The County Council has submitted detailed appraisals of the strategic sites presented on the maps in 3.1 earlier in the Local Plan process. It should be noted that all of these will need to be subject to fully detailed appraisal to inform development proposals and master planning. *Brownfield sites* Although brownfield sites may be attractive for development for various reasons, they can nonetheless contain significant heritage assets. Medway has an important industrial past with early examples of chalk pits, factories and infrastructure related to the cement and other industries. These contribute significantly to the area's historic character and can be used in master planning new developments to help new build be better integrated into the existing landscape. Similarly, many such sites, especially quarries, will contain deposits of archaeological significance. Medway is important for Palaeolithic archaeology (c. 800,000 BC to 10,000 BC) and sensitive deposits may well survive beneath the floors, and along the edges of quarries. Riverside brownfield sites may well contain archaeological remains associated with the former river frontage. To establish the archaeological potential of brownfield sites, the County Council considers that it will be necessary to carry out detailed assessments in the form of desk-based assessment and, if appropriate, fieldwork. To ensure that new development on brownfield sites is fully integrated into the existing character of Medway's historic towns, it will also be important to ensure that Conservation Areas Appraisals are completed for all Conservation Areas. This should also be a recommendation in any action plan.
Chapter 4 Natural Environment	
4.2 Planning for Climate Change	Heritage Conservation Climate change impacts on many more aspects of life than just the natural environment. These are reviewed in some detail in this section, and it therefore seems to the County Council, an unusual place to have the climate change section. The County Council would suggest that climate change could be a section in its own right. As noted above under Strategic Objectives, heritage interacts with climate change in a range of ways. Heritage is both vulnerable to climate change due to drying and wetting on archaeological sites, increased erosion and flooding and increased storminess. At the same time, it has a role to play in combatting climate change due to the embodied energy in previously constructed buildings. The County Council would reiterate commentary raised within section 2.2.
4.3 Conservation and enhancement of the natural environment Policy S2: Conservation and Enhancement of the Natural Environment	Biodiversity The County Council does not consider that the policy is clear as currently drafted. For example, the first section states "*The Council will promote the conservation, restoration and enhancement of priority habitats and species and seek opportunities to deliver net gains for biodiversity."* However, it is not until the last paragraph that the policy highlights the statutory need for at least 10% Biodiversity Net Gain. The County Council would recommend that the policy needs to be divided up better in to clear sections - perhaps Designated sites, Species/habitats, Biodiversity Net Gain – that would enable the sections about habitat creation/mitigation hierarchy, for example, to be fed through the document. The policy states: "*Development proposals will be required to demonstrate that significant harm to biodiversity can be avoided; if not, then adequately mitigated; or as a last resort, compensated."* However, it does not state that applications will be refused if that does not happen – an approach taken in Policy S4 regarding development along the undeveloped coast. Policy S4 is significantly clearer that development will not be permitted if it does not meet the requirements. Policy S2 also states "*The Council recognises the hierarchy of sites designated for their importance for nature conservation"* but it does not clearly set out what the hierarchy of sites is – it is recommended that clarity is provided on this point. The County Council would recommend that Medway Council seek to go beyond 10% Biodiversity Net Gain if it is possible to demonstrate that it is viable. This could be perhaps through

Policy/Paragraph	Commentary
	increasing the requirement for the larger sites rather than those covered by the 'Small Sites Metric'. As part of the evidence towards this, Medway Council could seek to demonstrate that there has been a high loss of biodiversity within Medway and there is a need to increase the percentage. The County Council notes that Policy S2 includes the following statement "*Development proposals should seek opportunities to strengthen biodiversity networks and support the conservation objectives of any biodiversity site management plans."* The County Council would recommend that needs to be stronger than just "*should"* to ensure it is carried out. The National Planning Policy Framework (NPPF) paragraph 180 does also state *"should",* but the County Council recommends that the Local Plan should be aiming for more and make reference to the Local Nature Recovery Strategy.
4.4 Sites of international importance for nature conservation	Biodiversity The County Council agrees with the Strategic Access Management and Monitoring Strategy approach.
4.5 Landscape protection and enhancement	Heritage Conservation *Paragraph 4.5.5* To fully appreciate Medway's landscape character, it is first important to understand it. The main method for investigating historic landscape character is by historic landscape characterisation. This is a method of assessing the pattern of tracks, lanes, field boundaries and other features that comprise the historic character of the modern landscape. It will be particularly important for the proposed update to the Medway Landscape Character Assessment (LCA) to take account of the Historic Landscape Characterisation (HLC). This has only been completed for the Hoo Peninsula. However, the County Council would recommend Medway Council to extend the HLC across the rest of Medway and draw on the research to inform the LCA.
4.6 Securing strong green and blue infrastructure	Heritage Conservation If properly designed, green infrastructure has the potential to help new development be better integrated into the existing rural and urban landscape. The pattern of roads, tracks and lanes in the geography has been used for centuries to link Medway's towns, villages, hamlets and countryside. By taking advantage of these existing and historic routeways, people will be able to move through the area while retaining the historic geography of the region, but also following routes more likely to be accompanied by historic hedgerows and planting. This has the potential to unite heritage and ecology to help people access and enjoy green infrastructure features more easily and naturally. Using historic routeways also allows green infrastructure designers to incorporate heritage assets to provide features of interest. In turn, this will help people accessing the green infrastructure to become more aware of and value Medway's heritage which will in turn assist their conservation and re-use. For example, the Hoo area has links to internationally important fortifications at Grain. If the green infrastructure were to feature these it would help raise their profile to assist with conservation whilst arguably diminishing the attractiveness of the sites for anti-social activity. Green infrastructure can also be used to support tourism in Medway by linking historic sites and landscapes such as the Chatham Lines, Rochester Castle and Cathedral and the historic explosives works of the Hoo peninsula. To fully appreciate Medway's landscape character and incorporate it into green infrastructure effectively, it is first important to understand it. The main method for investigation of historic landscape character is by historic landscape characterisation. This is a method of assessing the pattern of tracks, lanes, field boundaries and other features that comprise the historic character of the modern landscape. This has been completed for the Hoo Peninsula and the County Council would urge Medway Council to draw on the research to identify connectivity between the heritage assets of the area.
Policy S5 Securing Strong Green and Blue Infrastructure	Public Rights of Way The County Council welcomes the reference to the Public Rights of Way (PRoW) Network and significance of "cross border links." Biodiversity

Policy/Paragraph	Commentary
	Policy S5 is about securing strong green and blue infrastructure, however, it does not refer to the Local Nature Recovery Strategy (as referred to in the Nature conservation section). There is a need to ensure that the Local Nature Recovery Strategy is considered in all relevant sections. The County Council would encourage the inclusion of a requirement within the plan to include integrated features within all buildings. The consultation document refers to high quality landscaping, however, it is recommended that this should ensure that native species and species which benefit wildlife are incorporated into developments.
4.8 Flood and Water Management	Heritage Conservation *Paragraph 4.8.17* Sustainable Urban Drainage Systems (SuDS) may have both direct and indirect impacts on the historic environment. Direct impacts could include damage to known heritage assets – for example if a historic drainage ditch is widened and deepened as part of SuDS works. Alternatively, they may directly impact on unknown assets such as when SuDS works damage buried archaeological remains. Indirect impacts are when the ground conditions are changed by SuDS works, thereby impacting on heritage assets. For example, using an area for water storage, or improving an area's drainage can change the moisture level in the local environment. Archaeological remains in particular are highly vulnerable to changing moisture levels which can accelerate the decay of organic remains and alter the chemical constituency of the soils. Historic buildings are often more vulnerable than modern buildings to flood damage due to their foundations. When SuDS are planned, it is important that the potential impact on the historic environment is fully considered and any unavoidable damage is mitigated. This is best secured by early consideration of the local historic environment following consultation with the Kent Historic Environment Record (HER) and by taking relevant expert advice. The County Council has recently produced guidance for SuDS and the historic environment. It provides information about the potential impact of SuDS on the historic environment, the range of mitigation measures available and how developers should proceed if their schemes are believed likely to impact on heritage assets. This guidance can be provided on request.
Chapter 5 Built environment	
General commentary	Heritage Conservation *Paragraph 5.1.2* For the Hoo Peninsula, a range of material is available to help developers design new development that is in character with existing heritage assets. These are the outputs of the Hoo Peninsula Historic Landscape Project – a major project carried out by Historic England from 2009 – 2012 that examined all aspects of the peninsula's heritage. In addition, there are the historic town surveys for Rochester, Gillingham and Chatham. Although these were produced a number of years ago, these are still very useful for identifying historic character and relevant heritage assets.
Policy TN1 Promoting High Quality Design	Highways and Transportation The County Council, as Local Highway Authority for Kent is supportive of this policy. It is not enough to simply reduce car parking provision, the County Council considers to achieve a sustainable development, a holistic approach is required, creating high quality spaces as a whole, that encourage people to want to be in them. Public Rights of Way The County Council welcomes the specific mention of PRoW connectivity within this policy.
5.7 Historic Environment	Heritage Conservation The County Council welcomes Policy S8, however subsequent historic environment policies (S9-S11) provide more detail for subsets of the historic environment, Policy S8 is important as it explains what Medway Council wishes the historic environment to contribute to life in Medway in the round. The County Council particularly welcomes the clear linking of the policy with the Medway Heritage Strategy, and that the policy highlights the roles of both designated and non-designated assets, the potential for sustainable re-use of assets and the potential of heritage to contribute to education, health and well-being.

Policy/Paragraph	Commentary
	One project that could advance this agenda is the 'Whose Hoo' project led by Medway Council but with a range of stakeholder partners. A submission for National Lottery Heritage Fund support was submitted earlier in 2024 and if successful the project could be a means to bring educational, health and well-being benefits to much of the Medway community through heritage actions.
5.8 Heritage Assets	Heritage Conservation *Paragraph 5.8.7* The County Council welcomes Medway Council's commitment to creating a Local Heritage List. The County Council would encourage the Council to ensure that this includes archaeological sites and historic landscape features as well as buildings so that a wider range of heritage assets can be identified and protected. The Kent Historic Environment Record (HER) is likely to be a start point for such a list and should certainly be updated with the locally listed assets as they are defined, and the County Council would ask that the County Council HER team be consulted at an early stage. *Paragraph 5.8.8* The text rightly notes the importance of Conservation Area Appraisals (CAA) for identifying non-designated assets. The County Council would therefore encourage Medway Council to ensure that all Conservation Areas have CAAs prepared.
Policy DM9 Heritage Assets	Heritage Conservation The County Council welcomes the policy. However, it is slightly unclear whether this policy is intended to cover archaeological sites or whether these are to be solely covered by policy DM11. In general, this policy is slightly confusing, and the County Council would suggest it could be usefully restructured. It might be helpful to state the main types of assets that the policy is intended to cover at the beginning – presumably historic buildings, parks and gardens and historic landscape features. Then, for each type, the policy could state what information should be supplied with the planning application. The policy states that "*In the exceptional circumstances where the loss of a heritage asset can be fully and robustly justified, the developer must make information about the heritage asset and its significance available to the Council, along with making it possible for any materials and features to be salvaged*." The NPPF states that the information should be made publicly available (para 211). Producing this information should also be the result of a structured programme of investigation or recording and the County Council would suggest that the use of the term 'salvaged' does not really convey this. Perhaps the last sentence of paragraph 4 could be replaced with "*In the exceptional circumstances where the loss of a heritage asset can be fully and robustly justified, the developer must make information about the heritage asset and its significance available, both to the Council and publicly, along with making it possible for any materials and features to be secured and safely stored.*"
5.9 Star Hill to Sun Pier	Heritage Conservation The County Council recommends that it would be helpful to explain that "*HAZ"* stands for Heritage Action Zone and what that represents. At present the acronym is left unexplained and this should be clarified within the document.
Policy DM10: Conservation Areas	Heritage Conservation The County Council welcomes the policy and would encourage Medway Council to ensure that all Conservation Areas have accompanying Conservation Area Assessments.
5.11 Scheduled monuments and archaeological sites	Heritage Conservation *Paragraph 5.11.1* As well as the known archaeological sites, it should be noted that Medway will also include many unknown archaeological sites.

Policy/Paragraph	Commentary
	Paragraph 5.11.4 The County Council welcomes the recognition that there will be archaeological sites in Medway that may not be scheduled but which are of equivalent significance. *Paragraph 5.11.5* The County Council requests that the phrase '*County Archaeologist*' be changed to '*Heritage Conservation team at Kent County Council*'. *Paragraph 5.11.6* Currently the text states that "*a detailed written assessment may be required*" in relation to applications with an archaeological interest. In fact, the NPPF clearly states that "*Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation*." The text should therefore be amended to make it clear that a desk assessment will be required.
Policy DM11: Scheduled Monuments and Archaeological Sites	Heritage Conservation The work 'important' is subjective. The County Council would suggest the first paragraph could be re-written as "*Development that adversely affects Scheduled Monuments and/or their setting, and archaeological sites of comparable significance will not be permitted*. " As described in comments under part 5.11.6 above, the NPPF is stronger than the current text. In addition, when a field assessment is required, this would be in addition to the desk assessment, not instead of it. The County Council would suggest this paragraph is re-written *Where development impacts or has the potential to impact heritage assets with archaeological interest, a desk-based assessment, and where appropriate, a field evaluation will be required.* As discussed under policy DM9 above, under the NPPF the developer also has the responsibility to make the information arising from the archaeological work publicly available and to provide for the archiving of the materials. This latter point can often be a bone of contention for developers and to make their responsibilities clear, the County Council would ask that the following sentence be added to the policy: *Developers will be required to make this evidence (and any archive generated) publicly accessible.*
Chapter 7 Economic Development	
Policy T14 Rural Economy	Highways and Transportation The County Council notes that this policy does not refer to access by sustainable modes. If people cannot access employment in rural areas by means other than the private car, it is not sustainable and could cause unacceptable congestion on the Kent network. Heritage Conservation It should be noted that much of Kent has historically had a dispersed settlement pattern. Development between villages and hamlets and among farm buildings would in many places be consistent with the historic character of those areas. English Heritage, the County Council and Kent Downs National Landscapes have published guidance on historic farmsteads in Kent that considers how rural development proposals can be assessed for whether they are consistent with existing character. The Kent Farmsteads Guidance has been endorsed by the County Council and it is recommended that Medway Council considers adopting the guidance as a Supplementary Planning Document, as part of the Local Plan process. The County Council would be happy to discuss this further.
Chapter 9 Transport	
General Commentary	Highways and Transportation Medway's transport vision and headline measures are set out in Chapter 9. The intention is to improve accessibility through a range of sustainable transport interventions as well as highway improvement schemes such as Blue Bell Hill. This is welcomed by the County Council as Local Highway Authority for Kent. The Strategic Transport Assessment proposes establishing a vehicle

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	trip budget aligned with a reasonable worst case scenario, together with a process whereby a developer is able to evidence that a place-based vision for access and movement can be achieved together with the reassurance provided by a monitor and manage approach. This is supported and the County Council will work collaboratively on cross boundary issues and scheme proposals. In this respect, the County Council wishes to highlight the importance of the existing strategic transport corridors connecting between Medway and Kent boundaries that experience congestion and air quality issues, and these will be of particular interest where the proposed development areas are likely to materially impact on them, and the operation of the associated local highway network. The consultation document does not refer to bus lanes or bus gates, and this is considered a missed opportunity by the County Council. A high quality, high frequency bus network is a key requirement in achieving sustainable travel and this should be considered on a strategic plan making level to ensure that it can be delivered in a cohesive way, and particularly with routes to/from the adjoining Kent districts. Bus lanes and gates can help to provide quicker journey times than private cars, increasing their attractiveness and offering real modal choice. Further consideration should be given to these features so that developers are aware of the expectations. With the River Medway running through the Medway area, the County Council would also recommend consideration should be given to its use within construction, to reduce trips on the road network. Public Rights of Way The County Council's Public Rights of Way and Access Service is keen to ensure that their interests are represented with respect to it's statutory duty to protect and improve PRoW in the County. The County Council is committed to working in partnership with Medway Council to achieve the aims contained within the Rights of Way Improvement Plan and the Medway Rights of Way Improvement Plan. The partnership aims to provide a high-quality PRoW network, which will support the Kent and Medway economy, provide sustainable travel choices, encourage active lifestyles and contribute to making Kent and Medway a great place to live, work and visit. The County Council recommends stronger emphasis on walking and cycling, again with reference to the Medway ROWIP policy, in order to seek opportunities for cross border Active Travel and leisure routes due to development both in Medway and neighbouring Kent Districts – Swale, Gravesham, Tonbridge and Malling and Maidstone.
Vision for Access and Movement	Public Rights of Way The County Council is supportive of the reference to the Local Cycling and Walking Improvement Plan (LCWIP) and Active Travel, however the County Council would also recommend reference is made to the Medway ROWIP should also be included.
Policy T20 Riverside Path	Public Rights of Way The County Council welcomes the incorporation of the King Charles III England Coast Path National Trail, however the reference to *"opportunities to provide linkages to other path networks*" should specify linkages to the PRoW network.
Policy T26 Accessibility Standards	Highways and Transportation The County Council would encourage Medway Council to seek from developers: public transport taster tickets, free membership to car clubs and driving credits for new residents, to further encourage the engagement of these modes. The County Council is implementing 'Mobility as a Service' (MaaS) and Medway may benefit from this once fully established, particularly for those sites near to the Kent/Medway border.
DM 18 Transport Assessments, Transport Statements and Travel Plans	Public Rights of Way The County Council recommends that the PRoW Network should be included in all development Transport Assessments and Travel Plans.

Policy/Paragraph	Commentary
Policy DM19 Vehicle Parking	Highways and Transportation With regard to this policy, where viability allows, the County Council would encourage Medway Council to consider promoting podium parking for communal parking. Whilst this would not directly affect the Kent network, creating high quality places and reducing the 'sea of car parking' (as per Policy T1) could help to achieve further modal shift, which could in turn, reduce trips on Kent's network. As set out above, achieving a high proportion of sustainable travel needs a holistic approach, looking at all elements.
DM20 Cycle Parking and Storage	Highways and Transportation The Wheels for Wellbeing charity state that disabled people often find it easier to cycle than walk but, face numerous barriers along the routes such as dismount signs and lack of appropriate parking. Therefore, in line with LTN 1/20, the County Council would encourage Medway Council to require a proportion of spaces for adapted bikes, which usually requires 1.5m between stands to allow for dismounting. Chargers for electric bikes are also encouraged. As above, whilst not directly affecting Kent's network, it forms part of the holistic approach.
Chapter 10 Health, Communities and Infrastructure	
General Commentary	Public Health The County Council would welcome continued joint working to ensure residents of Kent and Medway have access to necessary healthcare facilities and would welcome collaboration on this matter as the Local Plan progresses and site allocations come forward. Education *The County Council School Place Planning team welcome the opportunity to comment on the Medway local plan consultation. The County Council's position is that regrettably, for primary, secondary and special schools, there is not forecast to be surplus capacity in the areas of Kent that border the Medway Council area to accommodate the increase in demand associated with growth set out in the Local Plan. Any Pupil Product that is generated from the new housing development planned for Medway will likely need to be accommodate locally) with new provision.* *Notwithstanding that, KCC Officers in North, West and East Kent would welcome the opportunity for dialogue with Medway Council officers over local areas of concern and detailed discussions where travel to school patterns between the two authority areas already exist.*
Chapter 11 Minerals Supply	
General commentary	Minerals and Waste The County Council, as Minerals and Waste Planning Authority, notes that the Regulation 18 consultation document on mineral supply correctly recognises that the Medway area has no landwon soft or motor sand reserves (or geology) nor hard (crushable) rock reserves. Supply of these aggregate forming materials is reliant on importation, from Kent and elsewhere. Moreover, Kent forms an important part of its supply base, and this is factored into the Kent Local Aggregate Assessment (of supply and future needs) process. The County Council has no concerns regarding the strategy to be at least partially reliant on supply from Kent's reserves of these aggregate materials to meet local needs. The area does have potentially important resources of landwon sand and gravel, both as permitted reserves and potential reserves on the Hoo Peninsula that are both proven and unproven. This includes deep buried channel deposits that may amount to 35.6 million tonnes (mt). However, the area's ability to sustain an at least 7-year landbank of permitted reserves over the plan period is not considered to be realistic, given the sensitivity of the area where these deep channels buried deposits are most likely to be found. The vision to safeguard mineral resources, make best use of mineral (primary) resources and fully exploit the opportunity for secondary and recycled aggregates is not compromised by the stated inability to maintain an at least 7-year landbank of sand and gravel aggregates throughout the local plan period. The area also has two important industrial mineral deposits, including chalk and brickearth, that the consultation document acknowledges. The Local Plan could include further detail that there are known deposits of high purity chalk in the Cliffe area that are distinctive in their industrial application as compared to the Chalk Group as represented in the UK, and which may have a strategic role in supplying this specialist mineral to uses over the wider UK. The consultation document does correctly note the brickearth deposits that are located south of the Medway estuary - which, in all probability, have been previously extracted where viable by past brick manufacturing activities. The consultation document does not investigate this in any detail. However, to do so

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	may simply confirm that there are no viable deposits remaining in the Plan area that require safeguarding. The overriding strategic importance of the Medway area, to meet its own needs for minerals and the wider southeast region including London and beyond, is its significant importation capacity via its operational mineral importation wharves and associated rail infrastructure. These, and any planned or potential wharves, require specific focus in terms of their long-term safeguarding, to maintain mineral and mineral product supply. The Plan correctly acknowledges this requirement, which is part of the NPPF Part 17, paragraph 216 e. The proposed policies to safeguard mineral resources, safeguarding existing mineral supply infrastructure, supply of recycled and secondary aggregates and extraction of landwon minerals, is all in accordance with the requirements of sustainable mineral supply and safeguarding as set out in the NPPF Part 17, and is therefore supported by the County Council.
Chapter 12 Waste Management	
General commentary	<u>Minerals and Waste</u> The County Council, as Minerals and Waste Planning Authority, recognises that the Plan has to be in accordance with the National Planning Policy for Waste 2014 (NPPW) and the National Resources and Waste Strategy for England 2018 (RWS), in that the policies of the Plan should seek to apply the principle of the recognised waste hierarchy that seeks to move waste resources away from disposal towards recovery (material and energy), recycling and re-use applications. Though the Plan has more limited ability to effect the prevention of waste generation, the hierarchy sees that as the most preferred option. Moreover, the County Council recommends that the Local Plan should seek to achieve net self-sufficiency, where the area's waste generation in type and quantity is matched with the available permitted capacity. This ensures a high degree of 'proximity' and is therefore a far more sustainable pattern of waste resource management. The County Council notes that the consultation document recognises waste requirements, and has analysed the various waste streams and the available management capacity to apply the waste hierarchy effectively. It is recognised that no administrative area can be 'sealed' and waste movements respond to many factors, such as commercial imperatives, and these are not within the control of the authority or the planning system's ability to directly influence. The consultation document makes clear, there will be no significant shortfall up to 2041 in any of the principal waste streams. However, as the hierarchy is to be applied greater capacity at higher elements of the waste hierarchy, there will be a need to meet Government recycling targets in the main waste streams. These include Commercial and Industrial wastes, construction, demolition and excavation wastes. There would be a requirement for additional capacity which may need consideration by Medway Council. Policy T35: Provision of Additional Waste Management Capacity is a permissive policy based on if the proposals demonstrate that they will contribute to meeting the Plan's recycling targets of the cited waste streams. This approach is supplemented by a locational criteria policy (Policy T36: Location of Waste Management Facilities) that sets out the acceptable criteria for the location of additional capacity. This is an approach that is supported by the County Council as it is a rational way to meet the Government's recycling targets and the principle of waste development as set out in the NPPW. This is also reflected in the vision statement for waste to achieve a more circular economy with waste resources being managed in accordance with the waste hierarchy. How this is to be achieved is clarified and reinforced by the use of Circular Economy Statements (Policy DM23: Waste Prevention) for development over a certain scale. This approach is consistent with the NPPF. Where a material cannot be subjected to re-use or recycling, other recovery is the only other step that can be used. The Plan's Policy T37: Other Recovery sets out support for this when it is demonstrated that the waste is residual and cannot ascend the waste hierarchy any further. This approach is a rational way to address the fact that certain material will not, at present, ascend the waste hierarchy, though this may change with time and technological advances. Disposal of materials to land is an unavoidable, there will always be residues and hazard wastes that require safe disposal to land, the amount of capacity required is anticipated by the Plan as such that does not justify a specific target, and Policy T38: Non-inert Landfill is another permissive policy based on a demonstration of a justification to allow disposal to land, this is a rational approach. As is the Plan's policy for use of inert waste (often simply soils) for beneficial use (Policy T39: Beneficial Use of Inert Waste by Permanent Deposit). Thus, gaining some 'value' from the materials. The safeguarding of waste infrastructure is inexplicably linked to the achieving both net self-sufficiency and greater sustainability in waste management. The consultation documents approach to safeguarding is supported by the County Council as Minerals and Waste Planning Authority for Kent as it specifically requires any replacement capacity to offset any lost capacity to be in the Medway area in advance of any cessation of waste capacity operation. Thereby preserving proximity and supporting net self-sufficiency. The County Council, as Minerals and Waste Planning Authority for Kent has no adverse comments to make regarding the Plan's mineral and waste policy provisions, and notwithstanding the informational comments on the safeguarded minerals.

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Strategic Transport Assessment – Forecast Report	
	Highways and Transportation The Forecasting Report sets out the committed developments for both Medway and the surrounding Kent districts. Some of the Dartford Local Plan sites do not appear to be included, despite the Plan being adopted. The inclusion of these sites is required in order to ensure the model does not underestimate the future network. A 'Do Something With LTC' sensitivity assessment has been included to consider the Lower Thames Crossing (LTC), should this be granted permission. Section 5.7 states that the only difference between this scenario and the 'Do Something' scenario is the addition of the LTC link itself, the network and demand remains the same. However, the LTC is anticipated to redistribute traffic, induce demand and increase congestion around this part of the network and therefore, the County Council is concerned that this does not fully represent the future scenario. A number of the junctions and links on the Kent network are shown to have significant increases in flows under the 'Do Something' scenario e.g. Lower Road in Gravesham and the A228 and A229 and there is concern that this has not been addressed. The plans should be expanded to show the full extent of the modelled area and the impact on it, and the LoS assessment should include junctions beyond the AODM, where significant impacts are likely to occur, so that the impact on the Kent network can be fully understood. The modelling work shows there will be a negative impact on the Kent network, yet no mitigation is proposed at this time. This will be required as the Local plan work develops. The reports refer to a future year of both 2040 and 2041 and this should be clarified in future work.