

**Appendix E**  
**Environmental Assessment Matrices**

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<b>++</b> <b>Major Positive</b>	The option would be significantly beneficial to the SEA objective by resolving an existing environmental issue and/or maximising opportunities for environmental enhancement.
<b>+</b> <b>Minor Positive</b>	The option would be partially beneficial to the SEA objective by contributing to resolving an existing environmental issue and/or offering opportunity for some environmental enhancement. This effect would not be considered to be of significance.
<b>N</b> <b>Neutral</b>	The option would have a neutral effect on the SEA objective.
<b>?</b> <b>Uncertain</b>	There is insufficient detail available on the option or the baseline situation in order to assess how significantly the SEA objective would be affected by the option.
<b>x</b> <b>Minor Negative</b>	The option would partly undermine the SEA objective by contributing to an environmental problem and/or partially undermine opportunities for environmental enhancement. This effect would not be considered to be of significance.
<b>xx</b> <b>Major Negative</b>	The option would severely undermine the SEA objective by contributing to an environmental problem and/or undermining opportunities for environmental enhancement. This would be considered to be a significant effect.

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Theme	Policy	Biodiversity, Flora and Fauna	Historic Environment	Landscape & Visual Amenity	Water	Soil, Geology & Geomorphology	Material Assets	Population and Human Health	
<b>Properties at Risk from Fluvial Flooding</b>	01 – Where appropriate TWC will contact properties shown to be in Floodzone 3 to raise awareness of flooding and increase preparedness.	N	N	N	N	N	N	+ or N	The increasing of awareness of flooding will not directly impact on the environment, and therefore it will have neutral effects on all SEA receptors. Human receptors may experience a slight benefit through improved knowledge, reduced uncertainty/fear of flooding and increased preparedness.
	02 – TWC will where possible improve the flood mapping for all ordinary watercourses to better identify properties at risk of fluvial flooding.	N	N	N	N	N	N	N	+
<b>Properties at Risk from Pluvial Flooding</b>	03 – TWC will investigate any areas where more than 20 properties have been identified at risk of flooding within a 250m <sup>2</sup> grid square, or where more than 10 properties have been identified at risk of flooding within adjacent 250m <sup>2</sup> grid squares.	N	N	N	N	N	N	N	Whilst this will improve TWC understanding of the risk of flooding and allow TWC to target key areas at risk of flooding, initially this will not directly impact, positively or negatively, on any of the SEA receptors.

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<b>Properties at Risk from Reservoir Inundation</b>	04 – TWC will continue to work with the owners of reservoirs to ensure that they are managed in line with the updated Reservoirs Act. TWC will produce Emergency On and Off Site Plans for all large raised reservoirs within the Borough.	?	N	?	N	N	N	?	Maintenance of reservoirs may reduce risk of failure and the risk of downstream flood consequences, although this is already assessed by the LFRMS to be “unlikely”. Therefore the consequences, if any, for most assets is neutral. However, reservoirs also provide amenity benefits, support fauna and flora and contribute to landscape quality. Whilst failure of any reservoir could be detrimental to each of these, there is also the potential for reservoir maintenance or modification to have an adverse effect. Thus the indirect environmental consequences of working with reservoir owners are uncertain for these environmental considerations.
<b>Properties at Risk from Groundwater Flooding</b>	05 – TWC will aim to gain a better understanding of flooding from ground water in the Borough.	N	N	N	N	N	N	N	Whilst this will improve TWC understanding of the risk of flooding from groundwater and allow TWC to formulate appropriate action plans where appropriate, at this stage it will not directly impact, positively or negatively, on any of the SEA receptors.
<b>Future climate change</b>	06 – TWC will ensure that climate change is taken into account in future flood alleviation projects and when checking the suitability of future development proposals within the Borough.	?	?	?	?	?	+	+	The consideration of climate change impacts in flood alleviation projects will ensure they are sustainable in the long term, and the local/regional benefits that they provide in terms of flood management are also sustainable. However, this could require larger flood defence infrastructure with a greater risk of impacting sensitive receptors.

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<b>Level of significant flooding in the Borough of Telford and Wrekin</b>	07 – Any flood event within the Borough affecting 3 or more properties, 2 or more business premises, or lengthy flooding of critical or transportation infrastructure will be deemed “Locally Significant” by TWC. In addition, any single property internally flooded on more than one occasion during a year will also be deemed “Locally Significant”.	N	N	N	N	N	N	N	The identification of ‘Locally Significant’ events will have neutral impacts on the environment (although the implementation of any subsequently recommended measures may have local positive effects).
<b>Duty to investigate Locally Significant Flood Events</b>	08 – TWC will work with appropriate stakeholders and land owners to investigate any Locally Significant Flood events.	N	N	N	N	N	N	N	The development of partnerships to investigate ‘Locally Significant’ flood events will have neutral impacts on the environment (although the implementation of any subsequently recommended measures may have local positive effects).
<b>Flood Risk Asset Registers and Records</b>	09 – TWC will maintain a register of structures and features, both man-made and natural, which act to reduce flooding, whether this is their primary purpose or not.	N	N	N	N	N	N	N	The maintenance of a register of structures and features which act to reduce flooding will have neutral impacts on the environment (although the implementation of any subsequently recommended measures may have subsequent positive effects on many of the SEA receptors depending on their location, nature and the role the structure feature has in reducing flooding).

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<b>Flood Risk from New Development</b>	10 – TWC will adopt SUDS features that adhere to the requirements of current national guidance documents.	+	+	+	+ or ++	N	+	+	The incorporation of adoptable SUDs will generally be beneficial to the environment (positive permanent local effects), being sympathetic to the local environment while providing the opportunity to protect water quality (by reducing urban pollution) and potentially providing a new habitat for wildlife. The greatest benefit will be seen in the water environment if SuDS are able to make positive contributions to water resource resilience or water body quality and support WFD objectives.
	11 – TWC will publish developer guidance in relation to the design and adoption of SUDS in the Borough of Telford and Wrekin.	+	+	+	+ or ++	N	+	+	As above
	12 – TWC will require an additional 3% modelling allowance on all residential developments to account for the increased areas of hard standing associated with urban creep.	N	N	N	N	N	N	N	This will improve the confidence in flood risk assessments and help to ensure that flood risk is not increased, but will have neutral impacts on the environment.

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Improving Flood Risk Management	13 – TWC will work with partner organisations to continue and improve the publication of emergency information via its social media accounts during a flood event. TWC will also promote the following of social media for properties known to be at risk from all sources of flooding.	N	N	N	N	N	N	+	The continued publication of emergency information will improve community understanding of emergency procedures and provide up-to-date advice to the local community (including the vulnerable). However is likely to have neutral impacts on most SEA receptors.	
	14 – TWC will promote the use of Flood Warning Services where applicable. TWC will also aim to establish flood warning services for ordinary watercourses where deemed necessary and if financially viable.	N	N	N	N	N	N	N	+	Flood Warning Services and likely to have neutral impacts on most SEA receptors. However, this action may positively affect human health, by increasing awareness and preparedness of the local community (including the vulnerable) to flooding (and may reduce the fear of flooding).
	15 – TWC will promote the use of Flood Resilience measures where it is unlikely that large scale flood defence schemes are planned or possible.	N	N	N	N	N	N	N	+	The promotion of Flood Resilience measures is likely to have neutral impacts on most SEA receptors. However, this action may positively affect human health, by increasing awareness and preparedness of the local community (including the vulnerable) to flooding (and may reduce the fear of flooding).

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	16 – TWC will keep a register of its existing drainage assets and produce Drainage Infrastructure Operation Plans for complex assets.	N	N	N	N	N	N	N	The maintenance of a register of existing drainage assets and production of Drainage Infrastructure Operation Plans will have neutral impacts on the environment. The implementation of any actions/ measures within Drainage Infrastructure Operation Plans may however have subsequent positive effects on many of the SEA receptors depending on the role the particular asset(s).
	17 – TWC will aim to cleanse highway gullies on a yearly basis, and cleanse priority gullies on a quarterly basis. Priority will be given to flooding emergencies, and any reported blocked gullies will be cleared within 2 weeks where possible.	+	+	N	+	N	+	+	A number of the SEA objectives will be positively influenced in Telford and Wrekin by improved (clear) drainage which will reduce the risk and impacts of flooding.  The reduced risk that flooding could mobilise contaminated sediment in gullies will particularly benefit downstream watercourses and aquatic ecosystems
	18 – TWC will take the lead in consenting appropriate works on Ordinary Watercourses within the Borough unless the works lie within the boundary of the Strine IDB.	N	N	N	N	N	N	N	It is unknown what the works will be and what affect they will have on SEA receptors. The potential for TWC to promote environmental improvements is assessed under objectives 22 and 23.

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	19 – TWC will contact riparian owners in high risk areas to remind them of their responsibilities and if necessary take enforcement action to ensure that flows are maintained.	?	+	+	?	N	+	+	It is expected that an increased awareness of responsibilities by riparian owners and avoidance of blockages to flow is likely to have positive effects on SEA receptors that will benefit from reduced flood risk. Channel maintenance may be advantageous or disadvantageous to water courses, depending on the nature of the works. E.g. removing an artificial obstruction will likely be beneficial whilst dredging or otherwise maximising channel capacity may be adverse.
	20 – TWC will assist in disputes between landowners where possible and take enforcement action if an amicable resolution cannot be achieved.	N	N	N	N	N	N	N	Assisting in landowner disputes over riparian responsibilities will have a neutral impact on SEA receptors; however the resolution of disputes and subsequent positive actions, in compliance with riparian responsibilities, is likely to have a positive impact in reducing flood risk in the area.
	21 – TWC will aim to raise awareness of the risks posed by flooding and methods of reporting with both residents and local business.	N	N	N	N	N	N	+	The raising of awareness to residents and business will improve understanding of flood risk; however it is likely to have neutral impacts on most SEA receptors. This action may positively affect the community, by increasing their awareness and preparedness (and may reduce the fear of flooding).

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<b>Enhancement of the Natural Environment</b>	22 – Assess development proposals to culvert and actively promote daylighting and de-culverting of watercourses on future developments.	+	N	+	++	N	N	+	Avoidance of new culverts and the promotion of de-culverting will be beneficial to the water environment (positive permanent local effects) by supporting contributions to water body quality and WFD objectives. Improvements should also result for aquatic biodiversity, and for terrestrial biodiversity and local communities if de-culverting opens up a green corridor or green infrastructure.
	23 – TWC will work with land owners to promote Catchment Sensitive Farming.	++	+	+	++	++	+	+	The promotion of catchment sensitive farming will generally be beneficial to the environment (positive local effects), being sympathetic to the local environment while protecting water quality and soils.