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West Lothian Council

ENVIRONMENT POLICY DEVELOPMENT AND SCRUTINY PANEL

UPDATE ON LINLITHGOW LOCH IMPROVEMENTS

JOINT REPORT BY HEAD OF OPERATIONAL SERVICES & HEAD OF PLANNING, ECONOMIC DEVELOPMENT & REGENERATION

A. PURPOSE OF REPORT

The purpose of this report is to inform and update the Panel about the various improvements proposed for Linlithgow Loch and surrounding area.

B. RECOMMENDATION

It is recommended that the Panel:

1. notes the content of the report and Appendices 1 and 2; and

2. offers any comments about further improvements to the Loch and surrounding area.

C. SUMMARY OF IMPLICATIONS

I	**Council Values**	• Focusing on our customers' needs; • being honest, open and accountable; • making best use of our resources; and • working in partnership.
II	**Policy and Legal (including Strategic Environmental Assessment, Equality Issues, Health or Risk Assessment)**	The Water Environment & Water Services Act 2003 requires local authorities to carry out their statutory functions and duties in a way, which adheres to the principles of the European Water Framework Directive. The Flood Risk Management (Scotland) Act 2009 requires local authorities to exercise their powers with a view to reducing overall flood risk. The Nature Conservation (Scotland) Act 2004 places a duty on officials and public bodies to further biodiversity. The Scottish Biodiversity Strategy identifies the role of local authorities in meeting national species and habitat priorities. Policy ENV18 of the West Lothian Local Development Plan (2018) supports the protection of Linlithgow Loch, as it is a Site of Special Scientific Interest (SSSI).

		The Local Biodiversity Action Plan is a supporting document of the now superseded West Lothian Local Plan. There are no equality or SEA issues. Health and risk assessment would be managed as projects are implemented.
III	**Implications for scheme of delegation**	None.
IV	**Impact on performance and performance indicators**	None.
V	**Relevance to Single Outcome Agreement**	SOA 3 - Our economy is diverse and dynamic, and West Lothian is an attractive place for doing business; SOA 4 - We live in resilient, cohesive safe communities; SOA 5 - People most at risk are protected and supported to achieve improved life chances; SOA 7 - We live longer, healthier lives and have reduced health inequalities; SOA 8 - We make the most efficient and effective use of resources by minimising our impact on the built and natural environment. SOA 10 - We live in well-designed, sustainable places where we are able to access the services we need.
VI	**Resources - (Financial, Staffing and Property)**	None, at this stage. External grants are likely to be sought to implement projects.
VII	**Consideration at PDSP**	The matter has previously been considered by the Environment PDSP in June 2011, March 2013, June 2015, February 2016 and April 2017, as well as the Local Area Committee in June 2017, and a PDSP update in April 2019.
VIII	**Other consultations**	Environmental Health, Historic Environment Scotland.

D. TERMS OF REPORT

D1 Background

Linlithgow Loch is one of only two remaining natural lowland lochs in the Lothians. It provides the setting for Linlithgow Palace and Peel. The loch is integral to the town's tourist appeal and provides various land and water-based recreational opportunities as well as being the focal point for naturalists and outdoor education activities.

The loch is owned and managed by Historic Environment Scotland (HES) and designated a Site of Special Scientific Interest (SSSI) for its botanical and ornithological interests. It was originally notified as the only example of a lowland mesotrophic loch in West Lothian. Site condition monitoring in 2004 concluded that the loch was in an unfavourable condition due to nutrient enrichment largely associated with land use in the catchment. Evidence now suggests that the loch is currently eutrophic (nutrient rich and at times lacking oxygen), trending towards hyper-eutrophic.

One of the negative effects of the increase in nutrient levels within the water body is the appearance of an extended seasonal bloom of blue-green algae which breaks down, releasing toxins into the water. This leads to a further decline in water quality and low oxygen levels and represents a potential risk to public health.

In April 2013, following almost a decade of investigation and data collection, the council confirmed its support for the Linlithgow Loch Catchment Management Plan (CMP). The plan included thirteen management recommendations to reduce the effects of contaminated run-off into the loch. These recommendations are reviewed in Appendix 1.

However, algal bloom issues continued over extended periods in 2014 and 2015. The 2016 season did not see as aggressive a bloom as previous years. This can be the result of temperature, wind conditions and light levels. While the 2018 season also had reduced levels of bloom, although it lasted from late July through to mid-December, the 2019 season saw reports of various blooms in Autumn. SEPA advised that the sample taken from Town Bay was the greenest sample that they had seen. However, by November the algae had dissipated.

D2 Review of Projects

The following projects were listed on a map attached to earlier reports to the Panel about Linlithgow Loch. The projects were grouped into those specifically related to the Loch (Blue circles / numbers) and those related to issues surrounding the Loch (Red circles / numbers). These references are used for the update below; numbers are not consecutive as some projects were undertaken and were then removed from the list. Details are set out in Appendix 2.

Issue 1: Bonnytoun Farm surface water management

While a surface water management scheme was drawn up to address run-off into the Hatchery Burn, which enters the north east corner of the Loch and initially discussed on site with the farmer and Central Scotland Green Network Trust, there remains currently no identifiable source for funding for the project. However, it remains a suitable project should funding be identified.

Issue 2a: Small linear car park / east end of loch on Bonnytoun Road

Whilst there is scope for a small linear car park on the west side of Bonnytoun Road to alleviate the pressure of informal parking along the road verge, there is currently no identified budget to advance it. There are drainage issues with road run-off affecting the east end of north side path. Roads & Transportation Services have assessed the road drains.

There was also flooding of the M9 underpass adjacent to the Oracle site in 2019, but this was resolved in liaison with Transport Scotland’s Road Operating Company.

A number of additional Peel-related sub-issues were identified from a joint site visit and raised with Historic Environment Scotland (HES). The issues and HES updated response are outlined below:

Sub-issue: replacement of chain-link fence along Peel / St Michael's RC Church boundary

While HES acknowledge that this chain-link fence is its responsibility to replace, currently no work has been undertaken on this fence line due to other more pressing HES priorities and limited funds.

Sub-issue: repointing / structural integrity of Low Port Primary School wall.

HES confirm that this wall is its responsibility and it was inspected in 2018, No urgent works are identified, but some minor remedial works will be programmed as part of the HES general maintenance programme.

Sub-issue: leaning trees in embankment alongside Low Port Primary School.

Due to inconsistencies between the tree survey previously undertaken by HES covering the entire Peel and also its more recent topographical survey, there was a review of the data from both surveys in 2019/20 and the most urgent / dangerous tree works were undertaken. There is a wider HES tree project underway where every tree on its estate is to be geo-tagged.

Issue 8: Removal of concrete stage to south of Rose Garden

HES acknowledge that this concrete plinth is in its ownership, however it is not seen as a high-priority to remove, nor does it have funds to do so. HES were approached in summer 2018 to use the stage by a local musician and again in 2019 by local groups.

Issue 9: Future of Peel timber bothies / sheds

Following a number of break-ins to these facilities, HES has carried out in 2019 a major replacement and upgrade programme related to the various previous operational structures to the south east corner of the Peel near Low Port and installed new green metal containers that are still to receive timber cladding due to their sensitive location within the Peel.

There are on-going discussions with the council's Planning Services with regards to the whether to clad these containers, adjust the style of cladding or request a change to permit no cladding. HES have provided one container for Linlithgow Gala Committee to use to store a new stage.

Issue 10: Former toilet block in Peel and entrance bothy at Market Lane.

While HES has no operational need for the former toilet block, they have no budget for demolition, and are willing to offer it to local groups if there is interest in re-use. However, the Market Lane bothy remains in use by HES ground staff. The Town Centre Manager has been asked if any local groups may have an interest in utilising the former toilet block.

Issue 11: Replacement of Harbour timber bothy with seasonal café / events platform

While HES has repaired the existing timber shed which has been leased to the Low Port Centre, it has not identified a budget to progress any new-build structure. New timber retaining walls have been inserted into the harbour area in 2019. Improvements to the harbour area and associated drainage have been scoped outwith plans, but again, no budget is available. HES remains committed to the Peel area with national events such as the annual jousting tournament.

Issue 13: Town Bay loch side path embankment coping stone replacement

The final length of the most frequently used stretch of the south loch path at Town Bay has been re-built, edged and re-surfaced by HES in 2019.

Issues 14: Nutrient Source Apportionment Study

While HES has continued its commitment to the Loch by funding the Nutrient Source Apportionment Study, unfortunately due to delay resolving legal issues between HES and the Centre for Ecology and Hydrology, who are the scientists supporting the study, monitoring did not finally get underway until Summer 2019.

This is a significant scientific study, which will take 18 months to complete and will influence a wide range of future major and minor actions to improve water quality in the Loch. Results and recommendations, which are now expected in early 2021, will be reported to a future meeting of the Panel.

It must be remembered that tackling loch pollution is a long-term issue. The similar, albeit larger, Loch Leven in Fife took more than twenty years to begin to realise water quality improvements and included significant public and a private sector investment.

Issues 15 & 16: Lady Park

Linlithgow Loch and the surrounding Peel, whilst in the ownership of HES, are considered to function as a District Park for the town. Consequently, £81k was allocated in NETs 2019/20 Open Space Strategy budget towards this site.

Improvements are focused on a proposal to re-align the lochside path and fence inside the field, to allow the west side of the loch to be re-wilded and to facilitate improved access. A planning application was approved by the council in October 2019. Property Services have engaged with both the Lady Park Trust and the tenant farmer since February 2018 with a view of acquiring the site by negotiation. As of August 2020, a negotiated acquisition has not been forthcoming to date. Property Services are currently pursuing acquisition including by Compulsory Purchase Order if required.

Issue 17: New Sluice at Mill Burn

HES have undertaken some dredging work / vegetation removal on the Mill Burn and has discussed with the adjacent owner about potential impact on the property boundary. A hand rail has been inserted into Mains Burn to facilitate safe access to the sluice.

The small footbridge at the west end of the loch is considered to be in reasonable condition. There is no budget available at present to install a new, wider bridge to link up with any proposed widening of the path along the west loch side at Lady Park.

The grille under the bridge is also functioning, but it is the responsibility of the local angling club to maintain and keep it clear of weed. There is on-going reed and bank management and stabilisation with willow weaving by HES and they offered a course to the local community. Eight local residents attended.

Issue 18: St Ninian's Road Culvert improvement

The council and HES continue to jointly monitor the water level and monitoring equipment on the culvert is to be left in place.

Issue 19: Review interpretation panels around the Loch

There has been no start to this project as it was viewed as a low-priority and the existing panels continue to be relevant and not significantly out of date. However, new panels are in production for the Palace and will be installed by the end of 2020.

D3 Management Structure

Since the Linlithgow Loch Summit involving numerous interested parties and local organisations was convened by HES in November 2015, one of the major actions resulted in the formation of a Strategic Loch Management Group comprised of senior officers from stakeholder organisations. Whilst the group initially met annually, it has been in abeyance awaiting the findings from the Nutrient Source Apportionment Study. Its recommendations will allow the group to consider how to prioritise actions and attract greater investment to improve water quality.

E. CONCLUSION

Linlithgow Loch remains an important asset for the town and for West Lothian. However, it remains in a long-term deteriorating condition due to pollution associated with surrounding land use within what is a complex catchment.

Once the results of the major Nutrient Source Apportionment Study are available in 2021, this will allow the Strategic Loch Management Group and associated ad-hoc working groups to review and consider its recommendations. It will allow the strategic group to consider how to prioritise actions and attract investment to improve water quality.

F. BACKGROUND REFERENCES

Linlithgow Loch Catchment Management Plan (April 2013)
https://www.westlothian.gov.uk/article/34751/Linlithgow-Loch

Appendices / Attachments - two

Appendix 1: Review of Linlithgow Loch Management Plan (2013) recommendations
Appendix 2: Map of Linlithgow Loch showing location of projects

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Appendix 1

EXTRACT FROM 2013 LINLITHGOW LOCH CATCHMENT MANAGEMENT PLAN – REVIEW & UPDATE MARCH 2020

Ref No'	Linlithgow Loch Management Plan Recommendations (2013)	Lead Partner(s)	Review & Update Comment - March 2020
1	*One additional desirable aquatic plant species is required for the community to be classified as favourable in line with the loch's SSSI designation. It may, therefore, be beneficial to conduct transplantation trials, where a robust desirable macrophyte species is removed from another loch or grown from seed in the laboratory and planted in Linlithgow Loch. It is critical to ensure any transplanted stock would be free of invasive species.* *The US Army Corp has developed a lake habitat model capable of assessing the likelihood of establishing specific macrophyte species under specific environmental conditions. This modelling approach may be useful in identifying a suitably robust desirable species for introduction to Linlithgow Loch. It should be stressed that the macrophyte community may be restricted due to poor water quality and that this issue may need to be addressed first, before other plant species are able to thrive in the loch.*	*Scottish Natural Heritage (validating)* *Centre for & Ecology Hydrology (PhD studies & involve local universities)*	Not taken forward as awaits results of Nutrient Source Apportionment Study 2019-21. No background information at present to allow decision on what best macrophyte species to be transplanted to Loch to help water quality. As part of Mains Burns works, there has been minor transplantation of reeds and willow in West Bay carried out by Historic Environment Scotland (HES).
2	*The reasons behind the general increase in waterfowl diversity and the decreasing trends in mallard, great crested grebe and little grebe should be identified. SNH can provide a regional or national perspective on the population trends for the relevant species.* *A plan should be developed to reverse the decreasing trends described above. These measures will likely be species specific and relate to behaviour, local habitat quality and regional and national scale climate*	*Historic Scotland Rangers Service (with input from SNH & BTO)*	Some work has been undertaken by HES. However mink are present in the area and potentially affecting wildfowl breeding. Forth Rivers Trust undertakes some mink trapping. HES natural heritage advisor is considering what further action might be taken and is in discussions with Scottish Canals and SEPA around the wider

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	patterns.		catchment impact /potential for improvement.
3	*A full mammal survey should be carried out within the catchment to determine the presence of different species and the threats to these species associated with poor water and habitat quality in and around Linlithgow Loch.* *This could be done as an extension of the mammal survey being carried out on the Avon and its tributaries under the auspices of the River Avon Trust in conjunction with Falkirk Environmental Trust.*	*River Avon Trust (through 3rd party grants)*	HES will look to fund this mammal study in 2020/21, depending on its available budget.
4	*The increase in fish stocking reported in recent years may have shifted the balance of the food web in the loch to favour a higher yield of algae. This has been reported in similar lakes across Europe where abundances of the main algal grazers, zooplankton (e.g. Daphnia sp.), are reduced under high stocking densities of zooplanktivorous fish.* *An assessment of the zooplankton community composition and biomass in relation to fish stocks and phytoplankton community composition and biomass should be conducted.* *In addition, a comprehensive survey of predator-prey relationships, to include cormorant-trout interactions should be conducted. A management plan should be prepared to review the above and to propose recommendations to achieve a sustainable fishery at Linlithgow Loch.*	*Centre for & Ecology Hydrology (PhD studies & involve local universities) with SEPA; Scottish Natural Heritage and Forth Area Federation of Anglers*	The new Forth Area Federation of Anglers (FAFA) lease with HES has recommendations on fish stock levels and the need for a stocking management plan included within it. However, both will be further advised by the forthcoming Nutrient Source Apportionment Study outcomes. The results of the Nutrient Source Apportionment Study which are anticipated to be available in 2021 are required before an assessment of the zooplankton community composition and biomass can be undertaken. This issue has been raised by FAFA in the past, but again the assessment of predator-prey relationships has been postponed until the results of the Nutrient Source Apportionment Study are available in 2021.
5	*It is recommended that a thorough socio-economic assessment be conducted to estimate the value of Linlithgow Loch to the town and the cost of poor water quality on socio-economic capacity. This activity could*	*WLC - NETs (subject to budget /*	A SROI study is in abeyance, until it potentially secures external grant funding based on Nutrient Source Apportionment Study recommendations.

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	constitute a Social Return on Investment (SROI) exercise, currently being pioneered by Greenspace Scotland.	*grant) with HES and Linlithgow CDT*	There has been an "*Ecosystem Service Valuation for Water Resource Management – A Natural Capital Accounting Case Study of Linlithgow Loch*" using benefit transfer and Semi-Structured Interviews. This was undertaken by a Master's Student from Edinburgh University in 2018/19.
6	*The public should be encouraged and aided to continue to manage the pressures on Linlithgow Loch. This should be aimed at a variety of audience groups and conducted through continuation of public events, liaisons with local schools and interest groups, and targeted education campaigns (e.g. for septic tank maintenance and the spread of invasive species as well as education on appropriate feeding of wildfowl through grain or seeds rather than bread).* *Given the local importance of Linlithgow Palace, archaeological investigations, for example, the continuing work commissioned by HES in the Peel, should be used to demonstrate the long and rich history of occupation and human use of Linlithgow Loch.*	*Linlithgow Community Development Trust, HES Rangers Service & continuation through the Loch Catchment Management Plan Working Group (with WLC & SEPA)*	The "*Fish in the Classroom* "programme led by Forth River Trust continues to be undertaken in local primary schools and is part funded by HES. The drain marking project was completed, however HES Rangers may take the project forward to maintain heightened levels of awareness and extend reach to Blackness Road properties and new CALA properties at Boghall site. There remains no incentive for septic tank owners to connect to the main system. The proposed Wilcoxholm development provides the potential to extend the sewerage network allowing those that wish to do so to connect to the sewer. However, the feasibility of this development remains in question until issues related to flooding and drainage can be resolved. In terms of invasive species, there has been localised treatment in and around the loch side, although Japanese knotweed has returned at Calf Lea near St Ninian's Road car park. Forth River Trust

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			has co-ordinated invasive species control between the months of March and October. With appropriate feeding of wildfowl, HES have had Rangers undertaking bread exchanges. FAFA also, now, sell grain from its fishing lodge, when open. On behalf of HES, Wessex Archaeology has undertaken a bathymetric survey of the loch. A public event to showcase this work will happen in February 2020. HES also await the results of core sampling, carried out in 2019 both in the Loch and around the Loch edge by Wessex Archaeology. HES Communications Team continues to explore opportunities to share information about the on-going Nutrient Source Apportionment Survey through various media channels to raise wider public awareness.
7	*It is recommended that a full and quantitative source apportionment survey be conducted in the Linlithgow Loch catchment to identify and prioritise management of main sources. An assessment of nutrient loading from inflowing streams should be conducted over a one year period and catchment surveys should be conducted to assess loads from 'hot spot' sources identified in the recent risk assessment.* *Specific management measures will be required to address different types of nutrient source. Event data from sewage overflows should be*	*Centre for & Ecology Hydrology (PhD studies & involve local universities)*	The Nutrient Source Apportionment Study finally got underway in June 2019, (i.e. HES staff carry out water sampling. Taking 6 samples from all Loch inlets on an 8 day cycle for a year, SEPA labs analyse the samples taken and CEH carries out further sample testing for Phosphorus and Nitrogen). CEH are due to carry out a full analysis at the end of the years sampling process and provide a written

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	documented and assessed to aid management of these systems and to reduce the impact on the loch. *SAC Consulting (a division of SRUC) should advise the farming community to continue to deliver improvements in high risk agricultural practices in the catchment. There is an on-going need to raise awareness of, and to provide farmers with additional information and advice on how to comply with:* • *The Diffuse Pollution General Binding Rules and other WFD requirements* • *Cross compliance including GAEC* • *Effective measures for control/minimisation of agricultural diffuse pollution from all sources* *Measures should be implemented to control or intercept nutrients from these sources where appropriate, and would benefit land management practices.*	*SEPA, Scottish Water and SAC Consulting /landowners.*	report with recommendations. This is due to report in early 2021. No further work has been undertaken by SRUC at present following their survey report in 2011.
8	*It is recommended that a comprehensive survey of bed sediments be conducted and that the Centre for Ecology & Hydrology (CEH) continue to investigate management options through laboratory and in-loch trials. These management measures may include treatment of bed sediments with materials known to adsorb phosphorus, regulation of flushing rate, or removal of nutrient rich sediments.* *It is stressed that control of internal loading should be considered only in combination with the control of nutrient sources in the catchment.*	*Centre for Ecology & Hydrology*	(As above - dependant on outcome of CEH Nutrient Source Apportionment Study).
9	*It is recommended that the current monitoring programme be developed to include comprehensive monitoring of cyanobacterial bloom occurrence to safeguard public health. This should be coupled with the completion of*	*SEPA with West Lothian Council*	These actions have been implemented by WLC Environment Health in association with SEPA, HES and NHS Scotland.

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	a rapid response public communication initiative, which is already under development. Nutrient reductions should be prioritised to reduce the likelihood of cyanobacterial blooms. *It is also important to define the difference between a perceived problem of cloudy water/excessive weed growth and an actual cyanobacterial bloom. This should be achieved through frequent reporting of water quality data, by implementing a rapid response procedure to inform public awareness of blooms, and through public education events.*	*(Environmental Health) and in association with NHS Scotland*	WLC Environment Health received reports of a possible algae bloom on Linlithgow Loch on 2/7/19. Water samples were taken from The Town Bay & The Peel on 9/7/19 and were analysed by SEPA. Both samples had low levels of blue-green algae of less than 20,000 cells/ml. On 29/7/19 Environmental Health received further reports of high levels of blue-green at Linlithgow Loch. Further water samples were taken on 30/7/19 and analysed by SEPA. Both samples had high levels of algae of greater than 100,000 cells/ml. SEPA advised that the sample taken from Town Bay was the greenest sample that they had seen. Further water samples were taken on 24/9/19 as well as two mid loch samples. The levels of algae at The Peel and Mid Loch East were less than 20,000 cells/ml. Levels at Town Bay and Mid Loch West still had high levels of over 100,000 cells/ml. Environmental Health reported in November 2019 that samples taken at Town Bay and The Peel on 19/11/19 were now absent from blue-green algae. Blue / green algae signage was removed by HES in November 2019 following confirmation that the bloom had subsided. Further signs are not erected over the winter months. There are two levels of signs dependant on algae results. Spring signs carry

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			general update and health information. If samples are over the threshold, then high algae level signs are erected around the Loch side by HES staff indicating restrictions on loch usage and this information is also shared with relevant user groups and displayed on the council's webpage.
10	*A survey of aquatic plants should be conducted annually to map the extent and spread (i.e. spatial maps) of desirable and non-native invasive species in the loch. These maps will provide the baseline data with which the efficacy of aquatic plant community control techniques may be assessed.* *For example, the use of jute netting has recently been demonstrated in water bodies to effectively reduce non-native species cover whilst acting to support the emergence of native (charophyte and angiosperm) species. Similar surveys should be conducted for terrestrial non-native invasive species including Japanese Knotweed and Himalayan Balsam.* *A non-native species management plan should be considered to manage all current and potential invasions.*	*Scottish Natural Heritage supporting Historic Environment Scotland Rangers Service*	These baseline survey maps cannot be progressed until the Nutrient Source Apportionment Study is available. As outlined in review of Management Recommendations 2 and 6 above, HES are looking at Knotweed and mink issues.
11	*It is recommended that a further study be conducted to install level sensors on the tributaries of the loch and on the Mill Burn which drains the loch. This comprehensive monitoring system will provide more high frequency flow data with which flood risk can be more accurately assessed.* *This study is required to underpin the assessment of measures required to reduce any flood risk associated with the loch for inclusion in the Local*	*West Lothian Council (Flood Risk Management Team)*	All these Actions have been carried out. WLC jointly purchased survey equipment with HES. A Flood Risk Assessment was produced that indicated the loch side properties were located at a higher level that flood risk. Remote survey equipment has now been removed,

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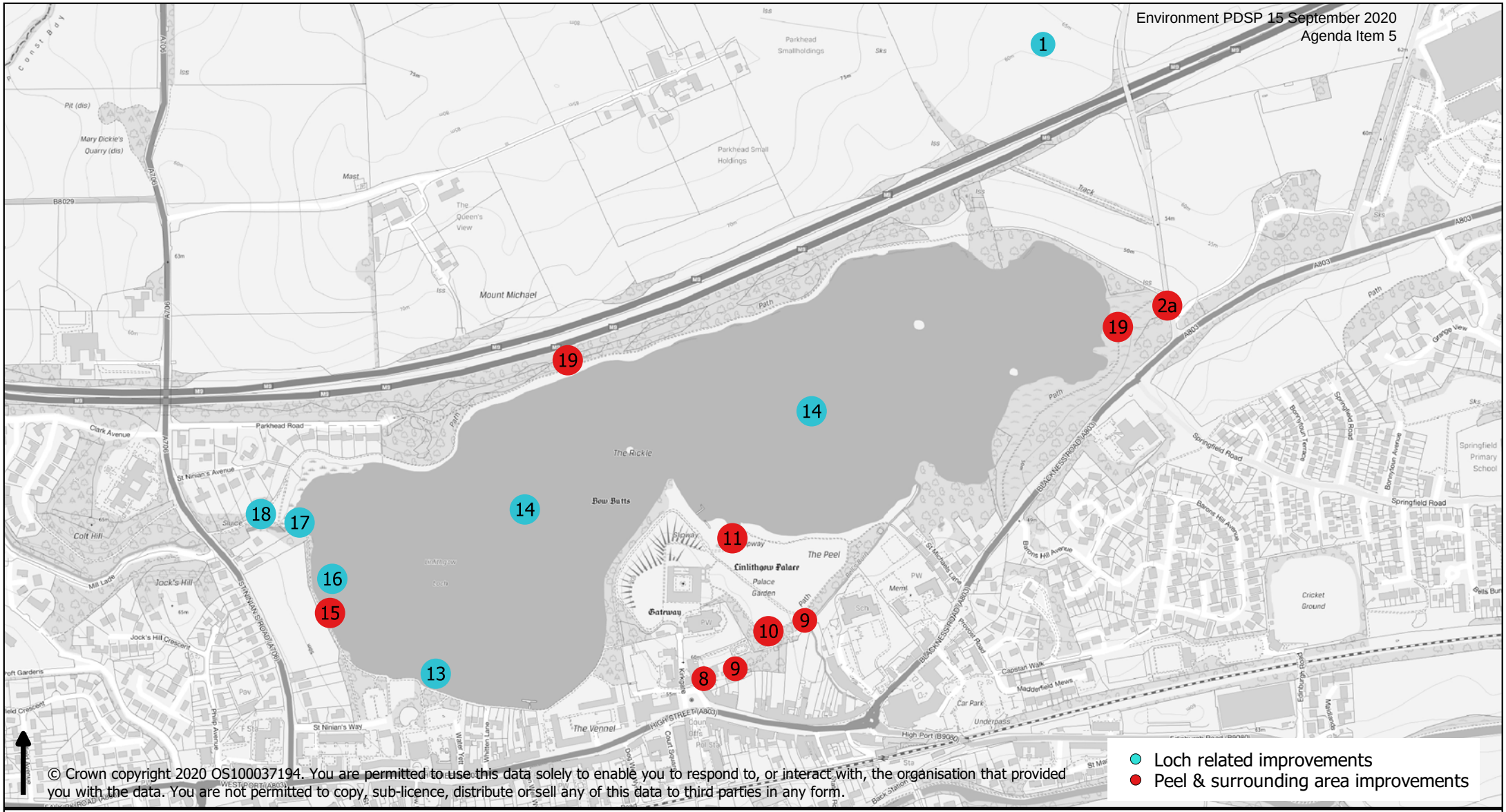
	Flood Risk Management Plan for wider West Lothian due for publication by West Lothian Council in 2015. *Finally, a rapid response procedure should be considered further with respect to communicating and responding to flood risk in 'real-time'.*		although sensors remains at Hatchery Burn and Mains Burn. Hand flow meter samples are being taken at other inflows as part of the Source Apportionment Survey.
12	*It is recommended that first time sewerage be provided to properties on Edinburgh Road, Linlithgow south of the canal bridge. Providing the owners of 24 properties with access to a waste water sewer would significantly lessen the pollution load on the Bell's Burn improving the quality of this watercourse, but providing a step-change in the quality of water reaching the Loch. Though nutrient from sediment already within the loch will effectively delay the benefit, first time sewerage is one of the most important steps that can be taken if the quality of water in the loch and the negative impacts that result are to be addressed.*	*SEPA, Scottish Water*	No progress.
13	*Sustainable drainage systems in the form of wetlands or ponds should be constructed to intercept runoff from road infrastructure, roofs and the private curtilage to take out sediment, lock-up diffuse pollution and attenuate flows before the cleaned water is issued into the loch.*		Awaiting results and recommendations from the Nutrient Source Apportionment Study which will help prioritise the principal sources of pollution. There is an expectation that Scottish Water and others such as SEPA and SNH would help fund these types of measure under its new, more flexible Investment Programme. Scottish Water Operations Senior management personnel attended the Linlithgow Loch summit in 2015 and subsequent Strategic Loch Catchment Management Group meetings in 2016 – 2018.



Linlithgow Loch & Peel: Potential Project List (not in priority order)

NB: All subject to consultation with community & owners

Appendix 2

1	Bonnytoun Farm surface water management	14	Algae Bloom in the loch - Nutrient Apportionment Study
2a	Small linear car park	15	Lady Park footpath widening/realignment
8	Remove small disused bandstand	16	Re-wilding loch side west town bay
9	Improve access via Market Lane into Lower Rose Garden (signage, mesh fence replaced by stone wall repairs)	17	New Sluice on Mill Burn
10	Disused toilet block/future of Bothy	18	St Ninian's Road culvert gradient improvement
11	Replacement stage for public events/seasonal cafe investigation	19	Review of interpretive panels around loch
13	Repairs to loch side footpath/asessment of loch side trees		

Scale:- 1:8000 April 2020

West Lothian Council