Lomond Banks

EIA Report Volume 3

On behalf of **Flamingo Land Ltd.**

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For and on behalf of Stantec UK Limited				

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Contents

1 Non-Technical Summary (NTS)

1.1 Introduction

1.1.1 This Chapter provides a summary of each of the technical assessments presented within Environmental Impact Assessment Report (EIAR) **Volume 1, Chapters 5 – 14**.

1.2 Ecology

1.2.1 An assessment of the likely significant effects on local ecology from the Proposed Development is provided in **Volume 1, Chapter 5 of the EIAR**. The chapter details the ecological studies undertaken and presents the results of an Ecological Impact Assessment (EcIA) undertaken for the Proposed Development in accordance with the latest guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM).

1.2.2 The ecology assessment has considered the likely effects of the Proposed Development on the Important Ecological Features (IEFs) within and in close proximity of the site. A suite of embedded and further mitigation measures is proposed to avoid, prevent and minimise the likely negative significant effects on IEFs.

1.2.3 Taking account of the proposed mitigation, enhancement and compensation measures there will be residual impacts on Ancient Woodland and mixed broad-leaved woodland as a result of the construction phase, as well as residual impacts on Ancient Woodland as a result of the operational phase. All of these residual impacts will be significant at the Site level.

1.2.4 Further ecological surveys will be needed at the detailed design stage for habitats, invasive non-native species, badger, otter, red squirrel, bats and nesting birds.

1.2.5 A shadow Habitats Regulations Assessment has also been prepared, which following the implementation of appropriate avoidance and mitigation measures, concluded that there will be no significant effects on Natura 2000 sites as a result of the Proposed Development.

1.3 Trees and Woodland

1.3.1 An assessment of the likely significant effects on Trees and Woodland from the Proposed Development is provided in **Volume 1, Chapter 6 of the EIAR**. The chapter details the trees and tree cover within the site. It is differentiated into nonspecialised woodland, woodland within the Ancient Woodland Inventory and individual trees and groups.

1.3.2 An assessment of old maps, aerial photographs and relict ancient woodland features within the Ancient Woodland Inventory (AWI) areas has been undertaken. Some adjustments to the AWI shapes have been found to be appropriate following the examination of old and current Ordnance Survey mapping. Ancient woodland value has been assessed by a number of appropriate overlapping criteria. Where no significant biodiversity legacy was found or likely to be present and/or where restoration potential, the impact is negligible.

1.3.3 Individual trees and groups of trees can be identified, protected by application of arboricultural survey, assessment and protection at the design, construction and operation phases and any planning conditions and additional protections deemed necessary by LLTNPA. Deep landscape buffer areas adjacent to existing residential development have been set aside and these represent an opportunity for net improvement of biodiversity and amenity tree and shrub density

1.3.4 A small area of the Boathouse area is within an existing Tree Preservation Order (TPO) but is the least publicly visible part of the promontory where young and semi-mature trees have been removed in the past. Additional tree planting around the proposed building can be designed and planted to accelerate the contribution that the boathouse area makes to the visual amenity provided by the promontory area.

1.3.5 Where no relict ancient woodland features are present then woodland removal has been assessed under the Scottish Governments Control of Woodland Removal Policy as' more

appropriate when accompanied by compensatory replanting' rather than as 'presumption against Ancient Woodland loss'.

1.3.6 The assessment of Sensitivity of Receptors and Magnitude of change shows some net negative impacts. However, following embedded and additional mitigation, the impacts range from Moderate Positive to Minor Negative, with an overall assessment impact being Neutral. The proposed development, woodland management and compensatory planting will ensure there will be no net loss of woodland and overall, the proposals will improve woodland quality and resilience.

1.3.7 Proposed details of woodland removal and compensatory replanting would be considered at the detailed design stage. This will be accompanied by a Woodland Management Plan for the area of greatest identified levels of ancient woodland character will improve the quality of the woodland by the removal of large areas of dense invasive non-native species and by the consolidation, protection and encouragement of regeneration at an ecologically appropriate pace.

1.4 Noise and Vibration

1.4.1 An assessment of the likely significant effects on sensitive receptors as a result of road traffic noise from the Proposed Development is provided in **Volume 1, Chapter 7 of the EIAR.**

1.4.2 A noise assessment has been carried out to assess the impact of the increase in traffic noise as a result of a proposed development at Lomond Banks in Balloch. The impact of road traffic noise on both existing and proposed residential receptors has been assessed against noise criteria agreed with West Dunbartonshire Council.

1.4.3 3D computer noise modelling has been carried out and validated against measured on-site road traffic noise data. The modelling considered current year (**2019**), and year of development completion (**2030**) scenarios. Vibration was scoped out of the assessment because it is not considered to be an issue.

1.4.4 The embedded mitigation of a 2m high barrier at Noise Sensitive Receptor (NSR) 11 (proposed woodland bothy closest to the A82) reduces the sound level at that NSR. The level of significance is moderate/major. This calculation of amenity area has been made from the façade directly facing the A82. If the amenity of area of NSR 11 was designed to be built on the eastern side of the lodge, the lodge itself would serve as a barrier to sound, and therefore reducing the sound level.

1.4.5 This reduction would most likely change the impact significance from moderate/major to moderate. No other residual effects have been identified.

1.5 Air Quality

1.5.1 An assessment of the likely significant effects resulting from change in air quality during the construction and operation phase of the Proposed Development is provided in **Volume 1, Chapter 8 of the EIAR**.

1.5.2 An air quality assessment was undertaken using an air quality model to investigate if there was potential for traffic emissions to impact future residents on site as well as existing residents in the vicinity of the site.

1.5.3 The model predicts no significant change in Nitrous Dioxide - NO_2, or Particulate Matter PM_{10} or $PM_{2.5}$ at all receptors on comparison of the 'with and without' development scenarios, with the impact magnitude for all sensitive receptors categorised as Negligible.

1.5.4 The overall impact of the proposed development on air quality in the study area can therefore be concluded as not significant. The level of effect of the proposed development in terms of air quality can therefore be categorised as 'Negligible or No Effect'.

1.6 Ground Conditions and Geology

1.6.1 An assessment of the likely significant effects on ground conditions resulting from the Proposed Development is provided in **Volume 1, Chapter 9 of the EIAR**. It also assesses the effects, such as potential contamination, from the ground conditions on the Proposed Development.

1.6.2 In terms of baseline conditions, the Woodbank House area is currently occupied by fields used for grazing, vegetated with woodland and various ruined buildings formerly associated with a hotel. The West Riverside area is occupied by woodland and walking paths and two INEOS oil pipelines run through the site from west to east.

1.6.3 A ground investigation characterised ground conditions across the Site, which comprise natural drift deposits with Alluvium (soft, sandy, clayey peat) primarily to the east of Pier Road, Glaciofluvial Deposits (sands and gravels with silt and clay), Till (gravelly sandy clay) and Made ground of more than 1m thick (almost entirely restricted to the eastern part of the site where former railway lines ran). Soils containing potentially elevated contaminants were primarily restricted to the area to the east of Pier Road and to the North of Ben Lomond Way. The primary contaminant of concern was lead which was potentially elevated in 14 soil samples.

1.6.4 Ground gas monitoring indicates that the area east of Pier Road and north of Ben Lomond Way recorded concentrations of carbon dioxide and methane in exceedance of trigger values. The design of buildings in these areas may require the inclusion of gas protection measures. The results for the remainder of the site indicate that no gas protection measures will be required.

1.6.5 The results of the analysis of groundwater samples have confirmed the presence of slightly elevated concentrations of heavy metals in some boreholes. The concentrations encountered are considered not likely to pose a significant risk to the sensitive water environment receptors (Loch Lomond and River Leven).

1.6.6 Additional area-specific site investigation will be designed to quantify the potential sources of contamination and to inform the design of the remediation / mitigation measures to be adopted. Investigations will also be required to target areas of potential instability associated with former Made Ground deposits and in areas of Peat and at heavily loaded or unusual structures such as the swimming pool and monorail stanchions.

1.6.7 Taking account of all proposed embedded and further mitigation, the likely construction and operational phases of the proposed development effects result in Minor Adverse effects which are considered to be Not Significant.

1.7 Water, Hydrology and Flood Risk

1.7.1 An assessment of the likely significant effects on the water environment which includes surface water and fluvial hydrology (including flooding); water quality; drainage; groundwater; water supplies; and wetlands from the Proposed Development is provided in **Volume 1, Chapter 10 of the EIAR**.

1.7.2 A suite of embedded and further mitigation has been proposed to avoid, prevent and minimise likely significant effects on the water environment, which includes:

- A buffer for construction activity within a 5m strip along waterfronts;
- Adherence to relevant national guidance, legislation and good practice in construction methods;
- Developing and adhering to a Construction Environmental Management Plan (CEMP) containing a Pollution Prevention Plan (PPP), which will include monitoring of activities on the Site to ensure compliance;
- The use of construction phase Sustainable Drainage Systems (SUDs);

- An Environmental Clerk of Works (ECoW) will supervise the construction works to ensure compliance with the above;
- Permanent surface water drainage network incorporating SUDs to ensure efficient levels of treatment and attenuation of surface water discharges from site;
- All Proposed Development is to be located outwith the functional floodplain as identified in the Flood Risk Assessment and the minimum finished floor levels of buildings on the Site are to be above the maximum flood level estimated for the 1 in 200 year plus climate change event; and,
- Routing of construction discharges through at least three levels of SUDs to ensure that water quality of high sensitivity receptors is not adversely affected.

1.7.3 Taking account of all proposed embedded and further mitigation, the Proposed Development is not likely to generate any significant effects upon the water environment.

1.8 Landscape and Visual Impact

1.8.1 An assessment of the likely significant landscape and visual effects during the construction and operation phase of the Proposed Development is provided in **Volume 1, Chapter 11 of the EIAR**.

Construction

Landscape

1.8.2 Significant adverse short-term landscape effects will only be experienced very locally, within the southernmost part of the National Park and the southern part of LCT 263: Lowland Loch Basin – Loch Lomond & the Trossachs. Four of the Special Qualities of the National Park will be affected.

1.8.3 These effects will be both direct and indirect. Direct effects on the landscape will occur within the site and its immediate setting, and result from the presence of the works, including tree removal. Indirect effects will be experienced within 1km of the site and will result from the visual influence of the works being carried out within the site, as well as the presence of construction vehicles using the local road network to access the site.

Visual

1.8.4 The locations where receptors are predicted to experience significant adverse short-term visual effects during construction all lie within 1km of the site.

1.8.5 The areas which will experience the greatest visual effects during construction are Pierhead and Station Square. This is not unexpected given that these are the areas where the larger-scale construction activity will take place and the changes to peoples' views will be most apparent.

1.8.6 Geographically the most extensive views of construction activity will be related to the Pierhead development and will be experienced by receptors mainly to the north, including from the open waters of the loch. Views from much of the shoreline will be obscured by the indented landform around the edge of the loch and by the relatively discrete location of the site within Drumkinnon Bay. Elsewhere, views of the construction activity related to other parts of the proposed development will be contained at close range by buildings within Balloch and the high coverage of woodland across much of the site.

Operation

Landscape

1.8.7 Significant adverse long-term landscape effects will only be experienced very locally within the southernmost part of the National Park and the southern part of LCT 263: Lowland Loch Basin – Loch Lomond & the Trossachs. These adverse effects, which will be direct and indirect, will

primarily arise from the development at Pierhead (including Pier Road) which will alter the character of the existing landscape. Four of the Special Qualities of the National Park will be affected.

1.8.8 In addition to the direct effects on the landscape, the Pierhead development will also be visible across the open waters of the loch and its visual influence will give rise to indirect adverse effects on the quality of the views both within and into / out of the National Park and LCT 263 at a distance of up to 1km. Drumkinnon Tower will, however, remain the most prominent built feature in the landscape.

1.8.9 Although the proposed development at Pierhead will be sympathetically designed to integrate into the surrounding landscape and appear as an extension to the Loch Lomond Shores development, it will replace an area of woodland around the loch shore and along Pier Road, which will have been removed during construction. Given its location within a nationally designated landscape and the fact that broadleaved woodlands are one of the Special Qualities of the National Park, the change resulting from its presence has to be perceived as adverse.

1.8.10 Whilst the effects of the Pierhead development on the landscape within the National Park and LCT 263 are considered to be adverse, the introduction of the proposed development at Station Square will result in a significant beneficial effect. This is because the high quality of the scheme, including a new public realm will be an improvement on the current character and appearance of the site. The introduction of a cluster of new buildings of coherent architectural style and massing, will strengthen the quality of Station Square and improve its legibility as a gateway to the National Park and the Highlands. The built development will be complemented by an attractive new public realm, in a style appropriate to its location.

1.8.11 The restoration of Woodbank House and management and enhancement of its wooded setting will improve the current run-down appearance of the Site. Bothies/ pods, woodland lodges and countryside lodges are not out of character with the southern end of the loch where there are several developments of this type, typically associated with the former estates.

1.8.12 The introduction of woodland lodges into the existing grassed area between Drumkinnon Woods and the River Leven at Riverfront, will alter the visual character of the site but it will be of equal quality and in keeping with the current landscape. Similarly, the redevelopment of the Boathouse will not have an effect on the character of its location.

Visual

1.8.13 The locations, predicted to experience significant adverse long-term visual effects during operation, are associated with the Pierhead development and the introduction of car parking and the monorail along Pier Road.

1.8.14 Geographically the most extensive views will be related to the Pierhead development and will be experienced by receptors mainly to the north, including from the open waters of the loch within 1km. Views from much of the shoreline will be obscured by the indented landform around the edge of the loch and by the relatively discrete location of the site within Drumkinnon Bay. Elsewhere views of the other parts of the development will be contained at close range by buildings within Balloch and the high coverage of woodland across much of the site.

1.8.15 In views across Drumkinnon Bay and from the open waters of the loch there will be a very noticeable change in the view. This is because the area of existing woodland between the Maid of the Loch Steamer and Drumkinnon Tower will be replaced by the three-storey apart-hotel which will extend around the shoreline. New tree planting around the building will be too immature to provide substantial screening although some retained existing trees will partially obscure views of the development.

1.8.16 The new buildings will be of a similar height and massing to the existing Loch Lomond Shores development and will appear as an extension to the existing buildings. A varied roof line and green-roof construction will also limit both their prominence and their perceived scale relative to existing development. Drumkinnon Tower will continue to be the tallest and most visible

building. Nevertheless, the long-term presence of built development across much of the view rather than woodland, represents an adverse change to the current outlook.

1.8.17 The introduction of car parking and the monorail along Pier Road, combined with the loss of woodland removed during construction, will result in significant adverse effects on the views experienced by users of Pier Road and occupants of residential properties along Clairinsh Avenue. Over time, however, as the compensatory tree planting matures these effects will reduce.

1.8.18 Significant beneficial effects are associated with the Station Square development, particularly when seen from Balloch Bridge, which is one of the key locations where visitors stop to appreciate the view north along the River Leven towards the Highlands. The only adverse effects will be experienced by occupants of the residential properties along the southern end of Pier Road who currently have open views across Station Square towards the River Leven. Due to their proximity to the proposed development and the loss of trees, which were removed during construction, these residents will experience long-term, adverse significant effects.

1.8.19 There will be no significant visual effects arising from the proposed development at Woodbank House either on users of the A82 and Old Luss Road, occupants of nearby residential properties, or receptors at Upper Stoneymollan. This is because the restoration of Woodbank House and management and enhancement of its setting will improve the quality of the views experienced, while the bothies and woodland lodges will be in keeping with similar developments in the locality.

1.8.20 At Riverfront, the introduction of woodland lodges into the existing grassed area between the woodland will change the appearance of the site and introduce more activity and movement, but its character will be of equal quality and in keeping with similar developments in the locality. The redevelopment of the Boathouse and the Staff Area will not give rise to a significant adverse effect on views.

1.8.21 In middle and long-distance views, the appreciable screening afforded by the high coverage of woodlands and the built-up edge of Balloch to the south will typically minimise any effects of the proposed development on views with the result that no significant visual effects are predicted to arise. This includes transient views from the footpath leading up to Balloch Castle through the Country Park to the east and from higher land at Upper Stoneymollan to the west.

Cumulative

1.8.22 No significant cumulative effects are identified other than the view of Station Square from Balloch Road. Here, the combined effect of the Sweeney Cruises proposals with the proposed development is considered to result in an adverse change to the current outlook. However, this is primarily because of the prominence of the Sweeney Cruises buildings rather than the proposed development, which alone is considered to be beneficial.

1.9 Traffic and Transport

1.9.1 An assessment of the likely significant effects on traffic and transport from the Proposed Development is provided in **Volume 1, Chapter 12 of the EIAR**.

1.9.2 As a result of design measures, the effects of the Proposed Development on the surrounding local and strategic road network, are not anticipated to result in substantial adverse effects. The embedded and operational mitigation is anticipated to greatly expand and enhance the walking, cycling and public transport environment within the immediate site and within the wider Balloch village. This is anticipated to materially change the local road focussed culture in the area, in conjunction with the Balloch Village, Station Square and streetscape proposals, which will see an uptake in the use of sustainable modes of travel within the local area.

1.9.3 All construction traffic to and from the site will be controlled by a routing agreement which will ensure the correct road hierarchy is used and will prevent the use of residential roads by such vehicles, therefore resulting in a temporary slight adverse impact on road users, pedestrians and cyclists during this phase.

1.9.4 There would be increases in traffic flows within the Site and Loch Lomond Shores as a result of the proposals, most noticeably on Old Luss Road (North) and Ben Lomond Way, which constitute the main access roads and links into the site.

1.9.5 Junction capacity impact assessments undertaken in the Transport Assessment indicate that remediation and mitigation are not required to improve the capacity at local or strategic road junctions. Moreover, increasing capacity is understood to lead to an eventual increase in vehicles, which should be avoided wherever practicable.

1.9.6 The provision of the improved public transport, pedestrian and cycle routes through the site and to the surrounding areas of Balloch will, in conjunction with site-specific initiatives as well as the implementation of a Travel Plan and other ongoing Parking and Access Management strategies, potentially lead to an overall increase in the uptake and propensity of use for sustainable modes to the moderate benefit of all road users.

1.10 Archaeology and Cultural Heritage

1.10.1 An assessment of the likely significant effects upon the setting and physical fabric of cultural heritage assets from the Proposed Development is provided in **Volume 1, Chapter 13 of the EIAR**.

1.10.2 There are four known heritage assets within the Site boundary on which a potential impact has been identified as a result of the Proposed Development: Category A listed Woodbank House with Garden Building, and non-designated heritage assets including: Woodbank House stables; a possible bothy at the north of the grounds of Woodbank House; and the disused railway line to the steamer pier north of the Site.

1.10.3 In addition, the Site is considered to be of medium archaeological potential for hitherto unknown archaeological remains. Potential impacts upon unknown archaeological deposits will be addressed through a staged programme of archaeological works likely to be undertaken as a post-determination planning condition.

1.10.4 Within the Site, the Category A listed building Woodbank House with Garden Building and stables have been assessed for potential direct and setting effects. Beyond the Site boundary, four further designated heritage assets are assessed for setting effects including: Drumkinnon Pier, Winch House including Slipway (Category A), Balloch Castle, Balloch Castle (Inventory Garden and Designed Landscape), and Balloch Castle, earthwork (Scheduled Monument).

1.10.5 Embedded mitigation and enhancement measures have been considered, and additional mitigation measures proposed as necessary to minimise the potential impacts of the Proposed Development.

1.10.6 Taking into account the implementation of mitigation and enhancement measures, there are no likely adverse direct or setting effects upon the historic environment arising from the Proposed Development which would be considered significant in the context of the EIA Regulations.

1.11 Socio-economics, Tourism, Recreation and Public Access

1.11.1 An assessment of the likely significant effects on socio-economics, tourism, recreation and public access from the Proposed Development is provided in **Volume 1, Chapter 14 of the EIAR**. This Chapter has been split into a socio-economic assessment, tourism and recreation assessment and public access assessment.

Socio-economic

1.11.2 The Study Areas for the socio-economic assessment is based on those settlements closest to the Proposed Development, limited by a 15-minue drive time catchment. The ‘wider area’ is defined to be within a 30-minute drive time, and the ‘wider region’ within a 45-minute drive time (see **Volume 2, Appendix 14.2, Figure 14.1**).

1.11.3 An extensive desk-based review of publicly available information was undertaken to establish baseline conditions of the Study Area. The following socio-economic indicators have been considered:

- Current and future demographic characteristics including population and age structure; and,
- Labour market indicators including economic activity, employment and qualifications.

1.11.4 The principal socio-economic assessment criteria relate to employment effects within the Study Area. These are defined in terms of Full-Time Equivalent (FTE) jobs and the Gross Value Added (GVA) generate by those jobs.

1.11.5 The socio-economic assessment shows that the Proposed Development will have a minor beneficial socio-economic impact through temporary construction employment and indirect employment supported through supply chain linkages in the wider economy and also job creation during the operation of the Proposed Development.

Tourism and Recreation

1.11.6 The Study Area for the tourism and recreation assessment is defined by a 5km radius from the Site (see **Volume 2, Appendix 14.1, Figure 14.2**). Facilities or notable points of focus for visitor attraction and recreation within this area have been reviewed.

1.11.7 A desk–based analysis has been carried out to determine key factors which impact upon tourism trends and the key drivers influencing the market. Factors such as visitor patterns and trends, occupancy rates and popular visitor attractions are analysed.

1.11.8 A desk-based audit has also been prepared to determine the scale of tourism and recreational activity and related facilities in the study area. The assessment covers key aspects including: tourism and recreation facilities; and those facilities and features which act as a focus or attraction for visitors, and lead to expenditure by visitors.

1.11.9 The following facilities and attractions have been identified in the study area:

- Indoor and outdoor tourist attractions – including cultural facilities, recreational amenities and leisure facilities;
- Visitor accommodation – including hotels, self-catering, Guest Houses and B&Bs;
- Hospitality establishments – including restaurants and cafes;
- Recreational assets – including Loch Lomond, the River Leven, Balloch Castle and country parks and woodland;
- Visitor activities – including walking, fishing, country pursuits, wildlife interests and sports; and,
- Visitor and tourist routes – including cycling, walking and rights of way.

1.11.10 The assessment of tourism and recreation shows that the vast majority of receptors will experience no significant effects. Overall, it is unlikely that the presence of the Proposed Development would result in a change in the visitor attractiveness or tourism potential identified tourism and recreation receptors to such an extent that would result in an adverse effect in the long term. It is likely that the Proposed Development will enhance visitor attractiveness and numbers resulting in long term permanent beneficial effects for the local and regional tourism sector and visitor economy.

Public Access

1.11.11 The assessment of public access shows that the vast majority of receptors will experience no significant effects. Formal and informal public access routes, such as the John Muir Way, Three Lochs Way, Lomond Shores Way and access to Drumkinnon Bay Beach have the potential to experience localised significant effects in the short term.

1.11.12 An Access Management Plan, proposed as embedded mitigation, will ensure continuity of access is maintained in the form of temporary localised diversions during the construction

phase. Whilst temporary and intermittent, this change will not inhibit access or greatly alter the recreational or experiential value of these routes. Furthermore, in the long term the Proposed Development will enhance a number of key formal and informal public access routes throughout the Site, resulting in a beneficial effect during the operational phase.

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