Chapter 5 Geology

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Peat	Excavation for Development Site above ground infrastructure, resulting in loss of peat.	Moderate Adverse	Layout developed to minimise infrastructure in areas of peat. Appropriate peat guidance to be adhered to. Outline PMP (Appendix 5.3, Volume 5) to be implemented	Minor Adverse	Not Significant	No change

Chapter 6 Terrestrial Ecology

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Creag nan Clag SSSI	No potential for effects from deterioration in air quality as a result of increased traffic during construction.	Negligible	None required.	N/A	Not Significant	No change
	No potential for dust generated during construction to have an effect on notified lichen species.	Negligible	None required.	Negligible	Not Significant	No change
Ancient semi-natural broadleaved woodland	Construction will involve the loss of approximately 8.7 ha of semi-natural ancient woodland. This represents approximately 7.25% of the total 120 ha within the Development Site boundary. In addition, felling and construction in this area may result in the loss of some bird's-nest-orchids, a species which is highly localised in Scotland.	Permanent Moderate Adverse	The temporary access track through the semi-natural ancient woodland will be reinstated on completion of construction works by replanting with native tree species. In addition, a mix of native broadleaves will be planted on the Landscape Embankment, covering an area of 33.6 ha. However, as it can take hundreds of years for newly planted forest to acquire the diversity of ancient semi-natural woodland, the residual effect is still considered to be permanent in this assessment.	Permanent Moderate Adverse	Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Long-established woodland of plantation origin with Scots pine	Approximately 110.2 ha of the long-established conifer plantation within the boundary of the Development Site will be clear felled to accommodate the Headpond and compounds. A further 24.5 ha will be thinned.	Permanent Minor Adverse	The Development Restocking Plan will result in the overall expansion of mixed native woodland, with an increase of 142.6 ha of this forest type. To recover the W18 habitat which will be lost, a range of tree species will be incorporated including rowan, birch and oak. It is anticipated that this woodland will re-establish to a condition similar to the current baseline within a reasonable timeframe.	Temporary Minor Adverse	Not Significant	No change
Other semi-natural broadleaved and semi-natural broadleaved woodland	There will be no effects on the large woodland extent at Glaic na Ceardaich and effects on other woodland involve trees which are small and of immature age.	Negligible	None required.	Negligible	Not Significant	No change
Vegetation containing frequent juniper	Construction of the Headpond will result in the loss of up to 20 juniper bushes. This compares to an estimated 1,000 bushes in the wider area which will not be affected by the Development.	Permanent Minor Adverse	Approximately 4.3ha of W19 juniper woodland will be planted, primarily in suitable areas on Ashie Moor where this species is already present. Juniper will comprise 60% of the species mix, with downy birch and rowan also planted. The provision of this additional area of juniper will represent a substantial increase on the current resource, in comparison to the small number of plants which will be lost to the Development.	Permanent Moderate Beneficial	Significant	No change
Blanket bog	Construction of the Headpond area (and to a much lesser degree, construction of Compound 1) will result in the permanent loss of approximately 8 ha of blanket bog. This compares to approximately 15 ha within the NVC survey area, but an estimated 85 ha in the wider area including all of Ashie Moor and the blanket around and extending south of Loch na Curra and Lochan an Eoin Ruadha.	Permanent Minor Adverse	None required.	Permanent Minor Adverse	Not Significant	No change
	Substantial increase in construction traffic associated with Headpond optimisation scenarios would result in increased vehicular emissions and deposition of nitrogen to blanket bog habitat, which is extremely sensitive to increased nitrogen levels. This could	Permanent Moderate Adverse	None possible.	Permanent Moderate Adverse		Significant

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	result in the increased growth of grasses and loss of Sphagnum mosses. This can substantially impact on the development of bog systems.					
Basic flush and flushed wet heath	The Headpond will eliminate two small flushes that include basic flush communities. A small amount of flushed wet heath will be lost to the access track north of Park farm. In contrast, there are substantial unaffected basic flushes in the Glaic na Ceardaich area, on Ashie Moor and on the west side of Lochan an Eoin Ruadha, as well as unaffected basic flush in the area north of Park farm. Flushed wet heath is extensive in part of the area north of Park farm.	Permanent Minor Adverse	None required.	Permanent Minor Adverse	Not Significant	No change
Dry heath, typical wet heath and oligotrophic waterbodies	Dry heath and typical wet heath habitats which will be lost to the Development are species-poor and occur widely in the surrounding area and the wider Highland region.	Negligible	None required.	Negligible	Not Significant	No change
Acid / neutral flush, swamp, watercourses and flushed purple moor-grass	No swamp, waterbodies or watercourses will be lost to construction. A small number of flushes will be lost to the Headpond, however these habitat types are common in the surrounding area and wider Highland region.	Negligible	None required.	Negligible	Not Significant	No change
Unimproved neutral grassland	Construction will result in the total loss of the narrow MG5 lowland meadow at the proposed location of Compound 2	Permanent Moderate Adverse	The loss of this area will be compensated by the creation of a similar meadow in a suitable nearby location. An appropriate MG5 seed mix will be sourced.	Negligible	Not Significant	No change
Groundwater Dependent Terrestrial Ecosystems	The main effect is the loss of small patches of flush and wet birch / willow woodland, and larger patches of fairly dry wet heath in the Headpond area. Slight loss elsewhere to access track / spillway construction.	Permanent Minor Adverse	None required, however, mitigation includes track design to permit percolation of water beneath and micro-siting of infrastructure to avoid direct effects on GWDTEs. In addition, where possible, wetlands will be established within new woodland areas.	Permanent Minor Adverse	Not Significant	No change
Bats	None of the trees which were found to support single roosting bats are situated in areas where tree felling will definitely be required to accommodate the	Temporary Minor Adverse	None required (although note that disturbance can only be permitted under licence issued by SNH).	Temporary Minor Adverse	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	Development. Vibration modelling for Trees 45 and 56 shows that they are unlikely to experience significant levels of disturbance from underground tunnelling works. Tree 107 is situated in close proximity to the temporary access track and may be disturbed by construction activities.					
Bats Cont.	There may be a need for some limited felling beyond those areas described above in which tree clearance is currently a confirmed requirement. This could lead to the loss of two trees which support single roosting bats.	Permanent Moderate Adverse	A total of 25 bat boxes will be installed in suitable locations across the Development Site in retained semi-natural broadleaved woodland and conifer plantation. This will include three boxes designed for use by maternity colonies and two which are suited for use by hibernating bats. Given the relatively limited opportunities for bat roosting identified on Site, and that potential roost features were only suitable for a small number of bats, the provision of bat boxes likely represents an enhancement on baseline conditions.	Permanent Minor Beneficial	Not Significant	No change
	Clear felling of 161.7 ha of woodland and thinning in a further 24.5 ha will be undertaken. Of the total area to be felled, approximately 8.7 ha constitutes semi-natural broadleaved woodland and 153 ha plantation coniferous / coniferous and mixed broadleaved woodland. The results of the bat roost surveys indicate that potential roost features were limited primarily to mature trees within the semi-natural broadleaved woodland, with very limited opportunity for roosting available within the coniferous plantation. Therefore, based on the results of field survey and an understanding of the suitability of the habitat in the wider area, it is not expected that tree clearance will result in the loss of a significant number of bat roosts. Additionally, any roosts which may be lost are unlikely to be of high conservation importance (i.e. they are unlikely to support maternity roosts or other large numbers of bats).	Negligible	None required, however 25 bat boxes will be provided, as described above.	Permanent Minor Beneficial	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Bats Cont.	Tree felling and the loss of habitat to construction of the Headpond will affect a small number of foraging / commuting bats. However, the removal of uniform and generally straight-edged forest blocks may result in the creation of new commuting and foraging opportunities by increasing the availability of edge habitat.	Negligible	None required, however the restocking of native broadleaved and mixed native woodland will increase this forest type by 214.4 ha from the baseline area. This is likely to lead to an enhancement of on-Site habitats for bats compared to existing plantation woodland.	Permanent Moderate Beneficial	Significant	No change
	With the exception of tunnelling, construction works associated with the Development will be limited to between 07:00 and 19:00. There is therefore very limited potential for direct disturbance to bats actively foraging or commuting as the majority of works will be limited to the time of day during which these species are resting.	Negligible	None required, however the use of lighting will be kept to a minimum and, where required, light spill to surrounding habitat will be minimised through the use of beam deflectors.	Negligible	Not Significant	No change
Badger	The nearest identified badger setts are more than 30 m from any construction area and the risk of disturbance being caused to badgers using these shelters is low.	Negligible	None required.	Negligible	Not Significant	No change
	The temporary loss of approximately 11.4 ha of optimal foraging habitat due to the construction of Compounds 2 and 3.	Temporary Minor Adverse	None required, however, enhancement for badger will be achieved by the planting of new mixed native broadleaved / conifer woodland.	Temporary Minor Adverse	Not Significant	No change
	The loss of coniferous plantation woodland in which badger were recorded as being active but which presents a sub-optimal foraging resource for this species.	Negligible	None required.	Negligible	Not Significant	No change
	The construction of the temporary access track between Compounds 2 and 3 will bisect badger territory. However, all but two disused / inactive outlier setts will be to the south of the track. In addition, construction use of the track will be predominantly during daylight hours and construction traffic will be limited to 15 mph.	Negligible	None required.	Negligible	Not Significant.	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	An increase in vehicular traffic during construction may potentially lead to direct mortality of badger on public roads.	Negligible	None required, implemented via Construction Traffic Management Plan.	Negligible	Not Significant	Upgraded to minor adverse, therefore Not Significant
Otter	Potential for temporary watercourse crossings to impact upon otter commuting.	Negligible	None required, however, all watercourse crossings will be designed so as to be passable to otter.	Negligible	Not Significant	No change
	Disturbance to foraging and/or commuting otter in Loch Ness during construction of inlet / outlet structure.	Negligible	None required, implemented via Construction Environment Management Plan.	Negligible	Not Significant	No change
	With the exception of Loch Ness, no other waterbodies will be affected by the Development. Loch Ashie, which is less than 150 m from the Headpond, is screened by existing mature plantation. There is therefore very low potential for disturbance to otter using this waterbody.	Negligible	None required.	Negligible	Not Significant	No change
	Low potential for direct mortality of otter during construction, operation and decommissioning given very low levels of otter activity on Site.	Negligible	None required.	Negligible	Not Significant	No change
Pine marten	Loss of woodland habitat for foraging and commuting pine marten, potentially resulting in the displacement of between one and two individuals.	Permanent Moderate Adverse	Native broadleaved and mixed native woodland cover will increase by 214.4 ha from the baseline area. Once established (which is considered to take between 10 – 15 years) this is likely to be of higher value to pine marten than the current plantation woodland as a greater diversity of species will be included, providing improved foraging resource.	Temporary Minor Adverse	Not Significant	No change
	The single pine marten shelter identified within the survey area for this species will not be directly affected by the Development. No other feature which was assessed as having suitability to shelter pine marten will be lost.	Negligible	None required, however, a total of two pine marten den boxes will be installed in semi-natural broadleaved woodland retained conifer plantation within the red line boundary as an enhancement measure.	Negligible	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Pine marten cont.	Potential for disturbance of foraging / commuting pine marten present in retained woodland and open habitats adjacent to construction areas.	Negligible	None required.	Negligible	Not Significant	Upgraded to minor adverse, and therefore Not Significant
	An increase in vehicular traffic during construction may potentially lead to direct mortality of pine marten on public roads.	Temporary Minor Adverse	None required, however to minimise risk of direct mortality a speed restriction of 30 mph will be applied to all construction traffic on public roads within the red line boundary.	Negligible	Not Significant	Upgraded to Moderate Adverse, and therefore Significant
Red squirrel	The loss of nine red squirrel dreys and the potential for disturbance of two additional dreys.	Permanent Moderate Adverse	Felling of trees containing dreys will be undertaken outside of the red squirrel breeding season, as far as possible. All dreys which are to be destroyed must be monitored to confirm whether they are occupied and to establish their breeding status. If a drey is considered to be occupied but not being used for breeding, the tree would be climbed by a qualified ecologist and the drey carefully inspected for the presence of red squirrel. Any animals present will likely leave the drey on approach of the tree climber. Once the ecologist is satisfied that the drey is empty, the tree will be felled. Felling will not be permitted in any case where it is suspected that a drey is being used for breeding purposes. Such locations will be monitored until it is considered that breeding is over, at which point the tree will be climbed and the drey inspected to confirm this to be the case.	Permanent Minor Adverse	Not Significant	No change
	The loss of approximately 153 ha of woodland habitat which supports red squirrel.	Permanent Moderate Adverse	Native broadleaved and mixed native woodland cover will increase by 214.4 ha from the baseline area. Once established (which is considered to take between 10 – 15 years) this is likely to be of higher value to red squirrel than the current plantation woodland as a greater diversity of	Temporary Minor Adverse	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
			species will be included, providing improved foraging resource.			
	An increase in vehicular traffic during construction may potentially lead to direct mortality of red squirrel on the B862 road near to Compound 2.	Temporary Moderate Adverse	To minimise risk of direct mortality, a speed restriction of 30 mph will be applied to all construction traffic on public roads within the red line boundary. In addition a red squirrel rope bridge will be erected over the B852 road north of Compound 2 to reduce the risk of mortality in this area where three dead individuals were recorded during field survey.	Negligible	Not Significant	Upgraded to Moderate Adverse, and therefore Significant
Great crested newt	Lochan an Eoin Ruadha, which tested positive for great crested newt eDNA will not be directly affected by the Development. In addition, suitable terrestrial habitat surrounding the loch will also be retained and will not be directly impacted upon during construction, operation or decommissioning.	Negligible	None required.	Negligible	Not Significant	No change
Common lizard	Construction of the Headpond will result in the permanent loss of habitat in which ten common lizards forming part of a breeding population were identified during field survey.	Permanent Minor Adverse	At least one artificial reptile hibernation refuge and one reptile basking bank will be constructed within the Landscape Embankment to mitigate for the permanent loss of reptile habitat within the footprint of the Headpond	Negligible	Not Significant	No change
	There is low potential for direct mortality of reptiles as a result of moving vehicles and plant in areas away from the Headpond.	Negligible	None required.	Negligible	Not Significant	Upgraded to minor adverse, and therefore Not Significant
	There is the potential for disturbance to common lizard during the construction phase, including as a result of vibration caused by blasting at the Headpond.	Negligible	None required.	Negligible	Not Significant	Upgraded to minor adverse, and therefore Not Significant
Butterflies, Dragonflies and	Temporary disturbance of habitats, in particular wetland areas, during construction	Negligible	None required.	Negligible	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Damselflies (excluding small pearl-bordered fritillary)	The permanent loss of habitat used by butterflies, dragonflies and damselflies during the construction of the project.	Permanent Minor Adverse	The embankment of the Headpond will be reinstated with a diversity of plant species which benefit butterfly species. In addition, the Landscape Embankment will be designed to include areas of habitat which are important to butterflies, dragonflies and damselflies, including open glades.	Negligible	Not Significant	No change
	The temporary loss of habitat used by butterflies, dragonflies and damselflies during the construction of the Development.	Temporary Minor Adverse	None required, however standard pollution prevention measures will be implemented to avoid contamination of habitat used by butterflies, dragonflies and damselflies.	Negligible	Not Significant	No change
	Dust generated during construction may smother vegetation used by butterflies, dragonflies and damselflies and pollution incidents may affect wetland habitats used by dragonflies and damselflies.	Temporary Minor Adverse	Standard dust management measures will be implemented in accordance with the Dust Management Plan.	Negligible	Not Significant	No change
Small pearl-bordered fritillary	The loss of a small population of small pearl-bordered fritillary at the southern end of the Headpond location.	Permanent Moderate Adverse	The embankment of the Headpond will be reinstated with a diversity of plant species which benefit small pearl-bordered fritillary. In addition, the Landscape Embankment will be designed to include areas of habitat which are important to this species.	Temporary Minor Adverse	Not Significant	No change
	The temporary loss of other habitat used by small pearl-bordered fritillary elsewhere on Site.	Temporary Moderate Adverse	Standard pollution prevention measures will be implemented to avoid contamination of habitat used by butterflies, dragonflies and damselflies.	Negligible	Not significant	No change
Small pearl-bordered fritillary cont.	Dust generated during construction may smother vegetation used by small pearl-bordered fritillary.	Temporary Moderate Adverse	Standard dust management measures will be implemented in accordance with the Dust Management Plan.	Negligible	Not Significant	No change
Rhododendron	Potential for spread of this invasive non-native species from the small number of locations where it was identified.	Negligible	Standard management measures required to comply with legislative requirement to ensure that this species is not caused to spread by Development activities. Control measures will be included within an Invasive Non-native Species Risk Assessment and Management Plan.	Negligible	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Sika deer	Potential for displacement of sika deer into retained woodland, and in particular ancient semi-natural broadleaved woodland, increasing browsing pressure on ground flora.	Temporary Minor Adverse	Deer fencing will be installed around the ancient semi-natural broadleaved woodland within the red line boundary. Deer left inside the exclosure will be controlled to reduce browsing pressure on ground flora.	Permanent Minor Beneficial	Not Significant	No change

Chapter 7 Aquatic Ecology

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Loch Ashie SPA and SSSI	Receive run-off from the Headpond construction area and suffer impacts on water quality.	Moderate Adverse	Supervised by the ECoW to ensure that water management measures, including SuDS, drainage ditches and attenuation ponds will be effective.	Negligible	Not significant	No change
	Effects of sediment input in run-off from transport and stockpiling of excavated materials	Moderate Adverse	Supervised by the ECoW to ensure that water management measures, including SuDS, drainage ditches and attenuation ponds, will be effective.	Negligible	Not significant	No change
	Introduction of INNS	Major Adverse	Material management, ECoW supervision, and strict biosecurity measures. Survey of the extent of the proposed Cofferdam and temporary Jetty works in Loch Ness for the presence of INNS, notably Nuttall's waterweed. Walkover survey of the watercourse crossing locations for INNS, both aquatic and riparian species. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS. Biosecurity measures implemented throughout the Development, following 'Check, Clean, Dry' principles.	Negligible	Not significant	No change
Loch Ness (Habitats)	Temporary disturbance to the shoreline and margins of Loch Ness; disruption and removal of substrate, including dredging	Moderate Adverse	Works in Loch Ness should be carried out under the supervision of an Aquatic ECoW.	Negligible	Not significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	after removal of the Cofferdam, and de-watering of this area.					
	Potential for spreading INNS within Loch Ness by barge transport	Moderate Adverse	Supervised by the Aquatic ECoW under the conditions of the CAR licence. Local barge sourced to reduce the potential to introduce INNS from other waterbodies; preferably a barge in existing usage on Loch Ness and the Caledonian Canal. Where possible, the barge should be inspected prior to arrival on-site and between deployments for the presence of INNS, and biosecurity measures implemented as considered necessary, according to check, clean, dry principles.	Negligible	Not significant	No change
	Impacts due to substrate and sediment removal and mobilisation, together with run-off from stockpiled material on the loch shore.	Moderate Adverse	Supervised by the Aquatic ECoW under the conditions of the CAR licence.	Negligible	Not significant	No change
	Potential for INNS to be spread through or introduced to the Development Site during construction.	Negligible	Survey of the extent of the proposed Cofferdam and temporary Jetty works in Loch Ness for the presence of INNS, notably Nuttall's waterweed. Local barge sourced to reduce the potential to introduce INNS from other waterbodies; preferably a barge in existing usage on Loch Ness and the Caledonian Canal. Where possible, the barge should be inspected prior to arrival on-site and between deployments for the presence of INNS, and biosecurity measures implemented as considered necessary, according to check, clean, dry principles. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS. The Aquatic ECoW will supervise all excavation and dredging works in Loch Ness to check for the presence of INNS and ensure that appropriate biosecurity measures, as detailed in the CEMP, are implemented. Biosecurity measures implemented throughout the Development, following 'Check, Clean, Dry' principles.	Negligible	Not significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	Temporary Jetty construction and delivery of materials by barge and associated disturbance.	Negligible	Supervised by the Aquatic ECoW under the conditions of the CAR licence.	Negligible	Not significant	No change
Loch Duntelchaig, Lochan an Eoin Ruadha and Loch na Curra	Receive run-off from the Headpond construction area and suffer impacts on water quality.	Minor Adverse	Works in this area will be supervised by the ECoW to ensure that water management measures, including SuDS, drainage ditches and attenuation ponds, will be effective in preventing the run-off of silt-laden water to adjacent watercourses and waterbodies.	Negligible	Not significant	Upgraded to minor adverse, therefore Not Significant
	Effects of sediment input in run-off from transport and stockpiling of excavated materials	Minor Adverse	None required	Negligible	Not significant	Upgraded to minor adverse, therefore Not Significant
	Introduction of INNS	Moderate Adverse	Survey of the extent of the proposed Cofferdam and temporary Jetty works in Loch Ness for the presence of INNS, notably Nuttall's waterweed. Walkover survey of the watercourse crossing locations for INNS, both aquatic and riparian species. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS.	Negligible	Not significant	No change
Flowing watercourses	Watercourse crossings for temporary access Tracks and temporary Compounds, including diversion and culverting of watercourses.	Moderate Adverse	Culverting of watercourses supervised by the Aquatic ECoW to ensure the correct installation and functioning of SuDS and silt control measures.	Minor	Not significant	No change
	Potential for the Allt a' Mhinisteir watercourse to receive run-off from the area of Headpond and Embankment construction, and suffer associated impacts on water quality	Minor Adverse	Works in this area will be supervised by the ECoW to ensure that water management measures, including SuDS, drainage ditches and attenuation ponds, will be effective in preventing the run-off of silt-laden water to adjacent watercourses and waterbodies.	Negligible	Not significant	Upgraded to minor adverse, therefore Not Significant

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	Impacts to water quality in watercourses that will receive temporary and permanent drainage from the Embankment area.	Minor Adverse	Works in this area will be supervised by the ECoW to ensure that water management measures, including SuDS, drainage ditches and attenuation ponds, will be effective in preventing the run-off of silt-laden water to adjacent watercourses and waterbodies.	Negligible	Not significant	No change
	Material transport and management: the spread and run-off of sediment, and resulting reductions in water quality.	Minor Adverse	None required	Negligible	Not significant	No change
	Potential for INNS to be spread through or introduced to the Development Site during construction.	Moderate Adverse	Survey of the extent of the proposed Cofferdam and temporary Jetty works in Loch Ness for the presence of INNS, notably Nuttall's waterweed. Walkover survey of the watercourse crossing locations for INNS, both aquatic and riparian species. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS. Biosecurity measures implemented throughout the Development, following 'Check, Clean, Dry' principles.	Negligible	Not significant	Upgraded to minor adverse, therefore Not Significant
Pond	Impacts on aquatic habitats associated with material transport and management are the spread and run-off of sediment, and resulting reductions in water quality.	Negligible	None required	Negligible	Not significant	No change
	Potential for INNS to be spread through or introduced to the Development Site during construction.	Minor Adverse	Walkover survey of the watercourse crossing locations for INNS, both aquatic and riparian species. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS. Biosecurity measures implemented throughout the Development, following 'Check, Clean, Dry' principles.	Negligible	Not significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Aquatic macrophyte and aquatic macroinvertebrate community	Potential effects on the macrophyte and aquatic macroinvertebrate community in Loch Ness due to Cofferdam construction and piling.	Negligible	Repeat aquatic macroinvertebrate survey is recommended in the autumn sampling season (September to November).	Negligible	Not significant	No change
	Watercourse crossings for Temporary Access Tracks and temporary Compounds, including diversion and culverting of watercourses.	Negligible	Repeat aquatic macroinvertebrate survey is recommended in the autumn sampling season (September to November). Culverting of watercourses supervised by the Aquatic ECoW to ensure the correct installation and functioning of SuDS and silt control measures.	Negligible	Not significant	No change
	Construction of the Headpond and Headpond Embankment, including land take and transport of excavated material.	Negligible	Works in this area will be supervised by the ECoW to ensure that water management measures, including SuDS, drainage ditches and attenuation ponds, will be effective in preventing the run-off of silt-laden water to adjacent watercourses and waterbodies.	Negligible	Not significant	No change
	Transport of excavated tunnel material to Headpond via conveyor belt, and management of material from tunnelling works.	Negligible	None required	Negligible	Not significant	No change
	Potential for INNS to be spread through or introduced to the Development Site during construction.	Minor Adverse	Survey of the extent of the proposed Cofferdam and temporary Jetty works in Loch Ness for the presence of INNS, notably Nuttall's waterweed. Walkover survey of the watercourse crossing locations for INNS, both aquatic and riparian species. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS. Biosecurity measures implemented throughout the Development, following 'Check, Clean, Dry' principles.	Negligible	Not significant	Upgraded to minor adverse, therefore Not Significant
	Temporary Jetty construction and delivery of materials by barge and associated disturbance.	Negligible	None required	Negligible	Not significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Atlantic salmon and lamprey species (Loch Ness)	Direct mortality or physical injury through construction, piling and de-watering activities; Physical injury as a result of piling noise; Avoidance reaction by salmon, potentially disrupting the migratory pathway.	Major Temporary Adverse	There should be a 'soft start' to piling works to deter fish from the immediate area where physical injury may occur. Works in Loch Ness should be carried out under the supervision of an Aquatic ECoW. A fish rescue will be required during de-watering of the Cofferdam as it is highly likely that fish will congregate in these sheltered areas during construction and then become trapped as the Cofferdam is sealed.	Moderate Temporary Adverse	Significant	No change
	Transport of excavated tunnel material to Headpond via conveyor belt, and management of material from tunnelling works.	Negligible	None required	Negligible	Not significant	No change
	Potential for INNS to be spread through or introduced to the Development Site during construction - factors such as inter-species competition and displacement.	Moderate Adverse	Survey of the extent of the proposed Cofferdam and temporary Jetty works in Loch Ness for the presence of INNS, notably Nuttall's waterweed. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS. Biosecurity measures implemented throughout the Development, following 'Check, Clean, Dry' principles.	Negligible	Not significant	No change
Other fish species (Loch Ness)	Direct mortality or physical injury through construction, piling and de-watering activities; Physical injury as a result of piling noise.	Moderate Temporary Adverse	There should be a 'soft start' to piling works to deter fish from the immediate area where physical injury may occur. Works in Loch Ness should be carried out under the supervision of an Aquatic ECoW. A fish rescue will be required during de-watering of the Cofferdam as it is highly likely that fish will congregate in these sheltered areas during construction and then become trapped as the Cofferdam is sealed.	Moderate Temporary Adverse	Significant	No change
	Temporary Jetty construction and delivery of materials by barge and associated disturbance.	Negligible	None required	Negligible	Not significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	Transport of excavated tunnel material to Headpond via conveyor belt, and management of material from tunnelling works - adverse effects of sediment run-off.	Negligible	None required	Negligible	Not significant	No change
	Potential for INNS to be spread through or introduced to the Development Site during construction - factors such as inter-species competition and displacement.	Moderate Adverse	Survey of the extent of the proposed Cofferdam and temporary Jetty works in Loch Ness for the presence of INNS, notably Nuttall's waterweed. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS. Biosecurity measures implemented throughout the Development, following 'Check, Clean, Dry' principles.	Negligible	Not significant	No change
Resident brown trout population (flowing watercourses within the Development Site)	Watercourse crossings for Temporary Access Tracks and temporary Compounds, including diversion and culverting of watercourses.	Minor Adverse	Electric fishing surveys of the Glaic na Ceardaich watercourse (sites KS08, KS09 and KS10), Allt a' Chruineachd (KS03), Allt a' Chnuic Chonaisg (KS12) and Allt a' Mhinisteir (KS05 and KS06) to inform mitigation for permanent and temporary watercourse crossings. Culverting of watercourses supervised by the Aquatic ECoW to ensure the correct installation and functioning of SuDS and silt control measures. Watercourse sections to be isolated and fish rescues carried out, according to the conditions of the CAR licence.	Negligible	Not significant	No change
	Construction of the Headpond and Headpond Embankment, including land take and transport of excavated material.	Negligible	Works in this area will be supervised by the ECoW to ensure that water management measures, including SuDS, drainage ditches and attenuation ponds, will be effective in preventing the run-off of silt-laden water to adjacent watercourses and waterbodies.	Negligible	Not significant	Upgraded to minor adverse, therefore Not Significant
	Impacts on aquatic habitats associated with material transport and management are the spread and run-off of sediment, and resulting reductions in water quality.	Negligible	None required	Negligible	Not significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	Potential for INNS to be spread through or introduced to the Development Site during construction - factors such as inter-species competition and displacement.	Moderate Adverse	Survey of the extent of the proposed Cofferdam and temporary Jetty works in Loch Ness for the presence of INNS, notably Nuttall's waterweed. Walkover survey of the watercourse crossing locations for INNS, both aquatic and riparian species. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS. Biosecurity measures implemented throughout the Development, following 'Check, Clean, Dry' principles.	Negligible	Not significant	No change
Other fish species (flowing watercourses within the Development Site)	Watercourse crossings for Temporary Access Tracks and temporary Compounds, including diversion and culverting of watercourses.	Negligible	Electric fishing surveys of the Glaic na Ceardaich watercourse (sites KS08, KS09 and KS10), Allt a' Chruineachd (KS03), Allt a' Chnuic Chonaisg (KS12) and Allt a' Mhinisteir (KS05 and KS06) to inform mitigation for permanent and temporary watercourse crossings. Culverting of watercourses supervised by the Aquatic ECoW to ensure the correct installation and functioning of SuDS and silt control measures. Watercourse sections to be isolated and fish rescues carried out, according to the conditions of the CAR licence.	Negligible	Not significant	No change
	Construction of the Headpond and Headpond Embankment, including land take and transport of excavated material.	Negligible	Works in this area will be supervised by the ECoW to ensure that water management measures, including SuDS, drainage ditches and attenuation ponds, will be effective in preventing the run-off of silt-laden water to adjacent watercourses and waterbodies.	Negligible	Not significant	No change
	Transport of excavated tunnel material to Headpond via conveyor belt, and material management of material from tunnelling works.	Negligible	None required	Negligible	Not significant	No change
	Potential for INNS to be spread through or introduced to the Development Site during construction - factors such as	Minor Adverse	Survey of the extent of the proposed Cofferdam and temporary Jetty works in Loch Ness for the presence of INNS, notably Nuttall's waterweed.	Negligible	Not significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	inter-species competition and displacement.		Walkover survey of the watercourse crossing locations for INNS, both aquatic and riparian species. Material excavated or dredged from Loch Ness must be retained in the immediate area, i.e. stockpiled on the loch shoreline, to prevent the spread of INNS. Biosecurity measures implemented throughout the Development, following 'Check, Clean, Dry' principles.			

Chapter 8 Ornithology

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Update FEI Significance
Loch Ashie SPA and SSSI	Noise levels generated by typical construction activities within the Headpond area are unlikely to result in disturbance to Slavonian grebe on Loch Ashie. Retained coniferous woodland will also provide permanent visual screening.	Temporary Minor Adverse	None required.	Temporary Minor Adverse	Not Significant	No change
	Blasting within the Headpond area has the potential to cause disturbance to Slavonian grebe during the pre- and post-breeding seasons.	Temporary Major Adverse	No blasting will be permitted during the period 15 August – 31 October each year to avoid effects to moulting Slavonian grebe. Trial blasting will be carried out prior to the commencement of construction and during the winter when Slavonian grebe will be absent. The aim will be to identify the charge size which can be used for blasting which will result in a maximum noise level of 75 dB(A) or lower when heard from Loch Ashie. This sound level is not expected to result in a flight response by Slavonian grebe based on the results of research into waterfowl disturbance. During the period 01 April – 15 May each year, all blasting will be restricted to use of the charge size identified by pre-works trials as producing a maximum sound of 75 dB(A) or lower when heard from Loch Ashie.	Negligible	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Update FEI Significance
	Limited potential for run-off of sediment and pollutants to Loch Ashie from construction activities in Headpond area.	Temporary Minor Adverse	Although not a significant effect, pollution prevention measures will be implemented to protect Loch Ashie and all other surface and groundwater systems.	Temporary Minor Adverse	Not Significant	No change
	Tree felling within the Loch Ashie catchment has the potential to increase run-off to the waterbody.	Temporary Minor Adverse	None required, however felled areas will be restocked with a mix of native tree species. This will provide long-term run-off protection.	Temporary Minor Adverse	Not Significant	No change
General breeding birds	There is the potential for the accidental destruction of active nests as a result of tree felling and other vegetation clearance where this work is undertaken during the bird breeding season.	Temporary Moderate Adverse	Pre-works checks for the presence of nesting birds will be carried out by the ECoW or other suitably experienced ornithologist. Where any active nest sites are identified, suitable species-specific works exclusion zones will be implemented and maintained until the breeding attempt has concluded.	Temporary Minor Adverse	Not Significant	No change
Crested tit	Possible shift in the boundary of a single possible territory owing to tree-felling for the re-routing of the C1064.	Temporary Minor Adverse	None required, however this species may benefit from the provision of nest boxes.	Negligible	Not Significant	No change
Crossbill	Loss of breeding habitat to the construction of the Headpond / Compounds, largely compensated in medium term by replanting of temporary Compound areas and planting of Scots pine and other trees elsewhere as part of Felling and Woodland Restructuring Plan.	Negligible	None required, 66.6 ha of productive Scots pine plantation will be established to compensate for woodland loss during construction.	Negligible	Not Significant	No change
Notable Red-listed passerines	Loss of tree pipit and lesser redpoll territories owing to the construction of the Headpond and Compounds.	Temporary Minor Adverse	None required, however notable Red-listed passerines are likely to benefit from the replanting of mixed native species, the expansion of juniper woodland on Ashie Moor and from the provision of nest boxes.	Permanent Minor Beneficial	Not Significant	No change
Waders	The majority of wader territories are situated beyond the distance at which disturbance is likely to occur as a result of construction activities. There is the potential for the displacement of one common sandpiper territory on the shore of Loch Ness.	Negligible	None required.	Negligible	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Update FEI Significance
Red-throated diver	There is predicted to be an average increase of 580 vehicles per day during the peak period of construction (month 37 of the construction programme). Should the peak period of construction occur during the red-throated diver breeding season, there is the potential for birds to be prevented from nesting at Loch na Curra due to the increase in traffic flows or for disturbance to be caused should a nest be established.	Temporary Moderate Adverse	Construction-related traffic will not be permitted to use the C1064 between the point where the public road will be diverted (near to Ach-na-Sidhe B&B) and the junction with B862 during the red-throated diver breeding season of April – September, inclusive (with the exception of a small number of abnormal loads). This restriction may be lifted only once it has been confirmed by the ECoW or other suitably experienced ornithologist that no breeding attempt has been made by the end of July or any established breeding attempt has concluded (either through failure or the successful fledging of young).	Negligible	Not Significant	No change but has the potential to increase construction period
	There is predicted to be an average increase of approximately 242 vehicles per day during the construction phase as a whole. This would represent an approximately 100 % increase on baseline levels. Given the high degree of tolerance shown by the red-throated divers at Loch na Curra to potential human disturbance sources, it is not considered likely that this would prevent the establishment of a nest or the disturbance of birds which set up a nest on Loch na Curra.	Temporary Moderate Adverse	As above, construction-related traffic will not be permitted to use the section of the C1064 near to Loch na Curra during the red-throated diver nesting season.	Negligible	Not Significant	No change but has the potential to increase construction period
	The diversion of the C1064 public road will take place approximately 220 m from Loch na Curra at the closest point. However, the red-throated divers which nested on this waterbody in 2017 and 2018 showed a high degree of habituation to human activities. In addition, works to divert the road within 500 m of Loch na Curra are expected to last no longer than one month.	Negligible	This effect is not significant and as such, no mitigation is required. However, as far as possible, diversion of the C1064 within 500 m of Loch na Curra will be programmed to take place outside of the red-throated diver breeding season.	Negligible	Not Significant	No change but has the potential to increase construction period
	Noise modelling carried out for the Development has estimated that, on average during the construction phase, activities within the Headpond will result in noise levels of approximately 61 dB(A) at the location of the 2017 and 2018 red-throated diver nest sites.	Negligible	None required, however an artificial raft will be installed prior to the commencement of construction in Loch nan Geadas, approximately 1.5 km to the south-south-west of Loch na Curra. By providing a raft at this location, alternative	Permanent Minor Beneficial	Not Significant	No change but has the potential to increase

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Update FEI Significance
	This is equivalent to the noise level of a normal conversation.		nesting habitat will be provided which could be used by red-throated diver. In addition, this raft will be retained and maintained following the completion of construction.			construction period
	Lochan an Eoin Ruadha and Loch Duntelchaig, which were both found to be used by foraging divers, are screened from works by mature woodland. Disturbance to foraging birds is therefore very unlikely to occur. Although Loch Ness is not screened from construction works, with the Tailpond Inlet / Outlet Structure being built on the waterbody itself, it is extremely large and there is opportunity for birds to forage beyond any distance at which they may be disturbed by on-going works.	Negligible	None required.	Negligible	Not Significant	No change
Black-throated diver	No black-throated diver breeding was identified within 1 km of the Development and the habitat is generally unsuitable for nesting by this species.	Negligible	None required. However, as an enhancement measure, an artificial raft suitable for black-throated diver nesting will be provided in Lochan an Eoin Ruadha on completion of the construction of the Development.	Permanent Moderate Beneficial	Not Significant	No change
	All of the waterbodies on which black-throated diver were recorded – Loch a'Chlachain, Loch Ashie, Lochan an Eoin Ruadha and Loch Ness – are all screened from construction works areas by mature woodland (with the exception of Loch Ness). However, Loch Ness is extremely large and there is a very large alternative area on which such activities could be carried out, even if birds were displaced by construction activities at the Tailpond Inlet / Outlet location. There is little potential for disturbance to black-throated divers foraging or displaying on these waterbodies.	Negligible	None required.	Negligible	Not Significant	No change
Slavonian grebe	There is predicted to be an average increase of 580 vehicles per day during the peak period of construction (month 37 of the construction programme). Should the peak period of construction	Temporary Major Adverse	Construction-related traffic will not be permitted to use the C1064 between the point where the public road will be diverted (near to Ach-na-Sidhe B&B) and the junction with B862 between April –	Negligible	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Update FEI Significance
	occur at the time when Slavonian grebe are likely to be present, there is the potential for birds to be prevented from using Loch na Curra due to the increase in traffic flows or for disturbance to be caused should a nest be established.		September, inclusive (with the exception of a small number of abnormal loads). This restriction may be lifted only once it has been confirmed by the ECoW or other suitably experienced ornithologist that no Slavonian grebe breeding attempt is underway and / or the loch is not being used by this species for other purposes.			
	There is predicted to be an average increase of approximately 242 vehicles per day during the construction phase as a whole. This would represent an approximately 100 % increase on baseline levels. However, given that this is still a relatively small number of vehicles and that Slavonian grebe can show a high tolerance to human activities, it is not considered likely that this would prevent the establishment of a nest or the disturbance of birds which set up a nest on Loch na Curra.	Temporary Moderate Adverse	As above, construction-related traffic will not be permitted to use the section of the C1064 near to Loch na Curra between April and September, inclusive.	Negligible	Not Significant	No change
	The diversion of the C1064 public road will take place approximately 220 m from Loch na Curra at the closest point. The works at this location will be relatively minor and of short duration. In addition, Slavonian grebe are typically only disturbed at distances up to 150 – 300 m.	Negligible	This effect is not significant and as such, no mitigation is required. However, as far as possible, diversion of the C1064 within 500 m of Loch na Curra will be programmed to take place outside of the period April – September, inclusive.	Negligible	Not Significant	No change
	Noise modelling carried out for the Development has estimated that, on average during the construction phase, activities within the Headpond will result in noise levels of approximately 61 dB(A) at Loch na Curra. This is equivalent to the noise level of a normal conversation.	Negligible	None required.	Negligible	Not Significant	No change
Black grouse	Up to three black grouse leks were identified on Drumashie Moor, north of the Development. These leks are situated in close proximity to the C1064 road and there is the potential for disturbance as a result of construction-related traffic arriving to site during the early-part of the lekking season. However, as the	Temporary Minor Adverse	None required.	Negligible	Not Significant	Upgraded to temporary moderate adverse which is therefore Significant

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Update FEI Significance
	season progresses and the time of sunrise becomes earlier, the potential for this to occur reduces.					
	The nearest lek site to a construction area was found on Drumashie Moor, approximately 1 km north of the Headpond. This is outside of the 300 – 500 m distance suggest that there is the potential for disturbance to be caused to lekking black grouse (**Error! Reference source not found.**).	Negligible	None required.	Negligible	Not Significant	No change
	Tree felling in Dirr Wood and the construction of the Headpond may result in the disturbance of black grouse foraging within this area.	Temporary Minor Adverse	None required.	Temporary Minor Adverse	Not Significant	No change
	Construction of the Development will require the felling of woodland habitat which is currently suitable for black grouse.	Temporary Moderate Adverse	A total area of 209.2 ha of productive native and mixed native woodland will be established, including a range of native broadleaved and conifer species. These will provide abundant food supply for black grouse. Furthermore, the relatively open stand structure and varied forest edge which is created is likely to result in overall habitat improvement for this species.	Permanent Minor Beneficial	Not Significant	No change
	No breeding by black grouse was identified within Dirr Wood in 2018. Although the habitat in this area is sub-optimal, there is the potential for nests to be established during the construction period and / or at the time of tree felling and this could result in the accidental destruction of nest sites containing chicks.	Temporary Minor Adverse	Pre-works nesting bird checks will be undertaken in advance of any tree felling or construction activities.	Negligible	Not Significant	No change
Barn owl	Loss of one non-breeding roost site in a tree near to Ach-na-Sidhe B&B.	Permanent Minor Adverse	A barn owl box will be installed on a suitable tree in nearby area, outside felling / construction areas.	Negligible	Not Significant	No change
	There is not expected to be any significant reduction in barn owl foraging habitat given that the agricultural grassland and open bog / heath habitats on-site will be almost entirely retained (with the exception of the footprint of the Headpond). Furthermore, as construction works will be limited to between 07:00 –	Negligible	None required.	Negligible	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Update FEI Significance
	19:00 each day, there is low potential for disturbance to be caused to actively foraging barn owls which are most likely to be roosting during these hours.					
Hen harrier	No breeding by hen harriers was confirmed within 2 km of the Development in 2018. The most suitable habitat for nesting by this species is generally beyond 1 km from works areas and outside of the distance at which disturbance is generally considered likely.	Negligible	None required.	Negligible	Not Significant	No change
	Hen harriers were recorded very rarely on-site during the breeding season and it is therefore of apparently very low importance to foraging by this species.	Negligible	None required.	Negligible	Not Significant	No change
Red kite	No nesting by red kite was identified within 2 km of the Development. A nest site which could be used by this species was located at 2.5 km from the Development and therefore, even if this became occupied in future years, there is no risk of disturbance.	Negligible	None required.	Negligible	Not Significant	No change
	Red kite were only observed on two occasions on-site and, given this species' tolerance to human activities, disturbance to foraging birds is not expected.	Negligible	None required.	Negligible	Not Significant	No change
Peregrine	The identified nest site is more than 4 km from the Development and is well beyond the distance at which disturbance to this species is likely to be caused by construction activities.	Negligible	None required.	Negligible	Not Significant	No change
Osprey	No osprey nests were established within 2 km of the Development in 2018 and only a single observation was made of an osprey sitting in a nest (which was subsequently unused) approximately 210 m from the nearest proposed infrastructure. However, ospreys are flexible in their choice of nest site and can adopt a range of natural and man-made features. In addition, this species can be very tolerant of human disturbance, with the median distance at which	Negligible	None required.	Negligible	Not Significant	No change

Ecological Feature	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Update FEI Significance
	disturbance of incubating birds occurs at between 175 – 225 m (**Error! Reference source not found.**).					
	Foraging ospreys used a number of the waterbodies around the Development Site but are not expected to be significantly disturbed by construction activities due to the presence of screening woodland and / or the distance between works and foraging areas.	Temporary Minor Adverse	None required.	Negligible	Not Significant	No change
	The only waterbody used by foraging osprey which will be directly affected by the Development is Loch Ness, as a result of the construction of the Tailpond Inlet / Outlet structure. However, Loch Ness is extremely large and the loss of an area of approximately 130 x 300 m which could be used for foraging represents a tiny proportion of the available resource.	Negligible	None required.	Negligible	Not Significant	No change
	The mature Scots pines of Dirr Wood provides optimal breeding habitat for osprey and birds were observed displaying breeding behaviour in this area, including carrying nesting material. A total area of 172.4 ha will be felled as part of the Development and this will result in the loss of potential nesting habitat.	Negligible	This effect is not significant and no mitigation is required. However, as an enhancement measure, an artificial osprey nest will be erected either in a suitable tree or on a pole in a suitable location.	Permanent Minor Beneficial	Not Significant	No change

Chapter 9 Flood Risk and Water Resources

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Offsite properties - High	Construction - Flooding due to: temporary increases in impermeable area and compacted ground; temporary	Low	Implementation of CEMP. Suitable design of surface water drainage (Drainage Strategy)	Negligible	Not Significant	Upgraded to minor adverse and therefore Not Significant

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	water storage and increased flow due to dewatering activities.					
Onsite users - Medium	Construction - Flooding due to: temporary increases in impermeable area and compacted ground; temporary water storage and increased flow due to dewatering activities.	Low	Implementation of CEMP. Suitable design of surface water drainage (Drainage Strategy)	Negligible	Not Significant	Upgraded to minor adverse and therefore Not Significant
Development - Low	Construction - Flooding due to: temporary increases in impermeable area and compacted ground; temporary water storage and increased flow due to dewatering activities.	Low	Implementation of CEMP. Suitable design of surface water drainage (Drainage Strategy)	Negligible	Not Significant	Upgraded to minor adverse and therefore Not Significant

Chapter 10 Water Environment

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Updated FEI Significance
Borehole drinking PWS at Balachladaich and Kindrummond	Construction of Waterways & Power Cavern – potential impact on groundwater levels and reduction in abstraction yield, Short term & temporary	Moderate Adverse	Pre-construction and construction phase monitoring	Negligible	Not Significant	No change
Borehole drinking PWS at Dirr Cottage and Ness View Cottage	Access and construction tunnel portals – potential impact on groundwater levels and reduction in abstraction yield, Short term & temporary	Moderate Adverse	Pre-construction and construction phase monitoring	Negligible	Not Significant	No change
GWDTEs to the north-east of tunnel portals	Potential impact on availability of groundwater to support the GWDTEs, Short term & temporary	Negligible	No mitigation is proposed	Negligible	Not Significant	No change
Borehole drinking PWS at Balachladaich, Dirr Cottage and Ness View Cottage	General construction activities – potential impact on groundwater quality, Short term & temporary	Minor Adverse	Pre-construction and construction phase monitoring	Negligible	Not Significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Updated FEI Significance
Inverness Groundwater Body	Construction of Headpond – potential impact on groundwater quality. Short term & temporary	Moderate Adverse	Pre-construction and construction phase monitoring	Negligible	Not Significant	Upgraded to minor adverse, therefore Not Significant
Loch Ness	Construction site run-off – suspended fine sediments, Short term & temporary	Moderate Adverse	The Development includes best practice measures to manage formation of excessive sediment in run-off and to provide treatment prior to discharge under permit to Controlled Waters to be described in a Surface Water Management Plan	Moderate Adverse	Significant	No change
	Construction site run-off – chemical spillages, Short term & temporary	Moderate Adverse	The Development includes best practice measures to reduce the risk of chemical spillages such as bunded fuel tanks, spill kits, plant nappies on static plant, and the implementation of an Emergency Response Plan	Moderate Adverse	Significant	No change
Loch Ness - Bathing Water at Dores	Water quality (foul waste water) during construction long term and permanent	Negligible	No foul waste water to be discharged to any watercourse flowing to Loch Ness. Foul water to be stored on Site and disposed of at a licensed waste facility by a suitably qualified specialist Contractor.	Negligible	Not Significant	No change
Allt a' Chnuic Chonaisg, Allt a' Chruineachd, S3 and S6 (as shown on Figure 10.1)	Construction site run-off – suspended fine sediments, Short term & temporary	Minor Adverse	The Development includes best practice measures to manage formation of excessive sediment in run-off and to provide treatment prior to discharge under permit to Controlled Waters to be described in a Surface Water Management Plan	Minor Adverse	Not Significant	No change
	Construction site run-off – chemical spillages, Short term & temporary	Minor Adverse	The Development includes best practice measures to reduce the risk of chemical spillages such as bunded fuel tanks, spill kits, plant nappies on static plant,	Minor Adverse	Not Significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Updated FEI Significance
			and the implementation of an Emergency Response Plan			
Allt a' Mhinisteir	Hydromorphological changes from new or upgraded watercourse crossings and diversion– disruption of sediment transport processes, permanent	Negligible	No mitigation is proposed	Negligible	Not Significant	Upgraded to minor adverse, therefore Not Significant
	Construction site run-off – Changes in morphology due to temporary increases in peak flows and fine sediment deposition , Short term & temporary	Negligible	The Outline SWMP includes measures to attenuate construction site run-off and remove fine sediments	Negligible	Not Significant	Upgraded to minor adverse, therefore Not Significant
Allt a' Mhinisteir (cont.)	Construction site run-off – suspended fine sediments, Short term & temporary	Minor Adverse	The Development includes best practice measures to manage formation of excessive sediment in run-off and to provide treatment prior to discharge under permit to Controlled Waters to be described in a Surface Water Management Plan	Minor Adverse	Not Significant	No change
	Construction site run-off – chemical spillages, Short term & temporary	Minor Adverse	The Development includes best practice measures to reduce the risk of chemical spillages such as bunded fuel tanks, spill kits, plant nappies on static plant, and the implementation of an Emergency Response Plan	Minor Adverse	Not Significant	No change
	Construction site run-off – Changes in morphology due to temporary increases in peak flows and fine sediment deposition , Short term & temporary	Negligible	The Outline SWMP includes measures to attenuate construction site run-off and remove fine sediments	Negligible	Not Significant	Upgraded to minor adverse, therefore Not Significant
Pond 7	Construction site run-off – suspended fine sediments, Short term & temporary	Negligible	The Development includes best practice measures to manage formation of excessive sediment in run-off and to provide treatment prior to discharge under permit to Controlled Waters to be	Negligible	Not Significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effect	Significance	Updated FEI Significance
			described in a Surface Water Management Plan			
	Construction site run-off – chemical spillages, Short term & temporary	Negligible	The Development includes best practice measures to reduce the risk of chemical spillages such as bunded fuel tanks, spill kits, plant nappies on static plant, and the implementation of an Emergency Response Plan	Negligible	Not Significant	No change
Big Burn	Construction site run-off – Changes in morphology due to temporary increases in peak flows and fine sediment deposition , Short term & temporary	Minor Adverse	The Outline SWMP includes measures to attenuate construction site run-off and remove fine sediments	Minor Adverse	Not Significant	Upgraded to moderate adverse, therefore Significant
	Hydromorphological changes – loss of catchment area, permanent	Minor Adverse	No mitigation is proposed	Minor Adverse	Not Significant	No change
Allt a' Chruineachd	Diversion of approximately the final 50 m before it flows into Loch Ness including a section to be culverted, permanent	Minor Adverse	The new channel will be designed in keeping with the existing channel	Minor Adverse	Not Significant	No change
Allt a' Chnuic Chonaisg	Hydromorphological effects from new temporary crossing	Negligible	Temporary crossing will be designed in accordance with best practice	Negligible	Not Significant	No change

Chapter 11 Landscape and Visual

Summary of Effects: Operation (Year 1)

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Broad Steep-Sided Glen	Effect on landscape character	Moderate Adverse	N/A	Moderate Adverse	Significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
			(All mitigation is embedded)			
Farmed and Wooded Foothills	Effect on landscape character	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Flat Moorland Plateau with Woodland	Effect on landscape character	Moderate Adverse	N/A (All mitigation is embedded)	Moderate Adverse	Significant	No change
Rocky Moorland Plateau	Effect on landscape character	Negligible	N/A (All mitigation is embedded)	Negligible	Not Significant	No change
Rocky Moorland Plateau with Woodland	Effect on landscape character	Negligible	N/A (All mitigation is embedded)	Negligible	Not Significant	No change
Viewpoint 1: Minor road adjacent to Ach-Na-Sidhe B & B	Effect on visual amenity	Major Adverse	N/A (All mitigation is embedded)	Major Adverse	Significant	Downgraded to moderate adverse, therefore remains Significant
Viewpoint 2: Abriachan	Effect on visual amenity	Major Adverse	N/A (All mitigation is embedded)	Major Adverse	Significant	Downgraded to moderate adverse, therefore remains Significant
Viewpoint 3: Lochend	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 4: Minor road to the north-east of Loch Duntelchaig (Trail of the Seven Lochs)	Effect on visual amenity	Moderate Adverse	N/A (All mitigation is embedded)	Moderate Adverse	Significant	No change
Viewpoint 5: Trail of the Seven Lochs between Loch Duntelchaig and Loch a' Choire	Effect on visual amenity	Moderate Adverse	N/A (All mitigation is embedded)	Moderate Adverse	Significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Viewpoint 6: Creag nan Clag	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	Upgraded to moderate adverse, therefore Significant
Viewpoint 7: Carn na Leitire (near The Great Glen Way)	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 8: Watercraft on Loch Ness	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 9: Urquhart Castle	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 10: Layby on A82	Effect on visual amenity	Moderate Adverse	N/A (All mitigation is embedded)	Moderate Adverse	Significant	No change
Viewpoint 11: Local road near Caisteal an Dunriachaidh	Effect on visual amenity	Major Adverse	N/A (All mitigation is embedded)	Major Adverse	Significant	No change

Summary of Effects: Operation (Year 15)

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Broad Steep-Sided Glen	Effect on landscape character	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Farmed and Wooded Foothills	Effect on landscape character	Negligible	N/A (All mitigation is embedded)	Negligible	Not Significant	No change
Flat Moorland Plateau with Woodland	Effect on landscape character	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Rocky Moorland Plateau	Effect on landscape character	Negligible	N/A (All mitigation is embedded)	Negligible	Not Significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Rocky Moorland Plateau with Woodland	Effect on landscape character	Negligible	N/A (All mitigation is embedded)	Negligible	Not Significant	No change
Viewpoint 1: Minor road adjacent to Ach-Na-Sidhe B & B	Effect on visual amenity	Moderate Adverse	N/A (All mitigation is embedded)	Moderate Adverse	Significant	Downgraded to minor adverse, therefore Not Significant
Viewpoint 2: Abriachan	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 3: Lochend	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 4: Minor road to the north-east of Loch Duntelchaig (Trail of the Seven Lochs)	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 5: Trail of the Seven Lochs between Loch Duntelchaig and Loch a' Choire	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 6: Creag nan Clag	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 7: Carn na Leitire (near The Great Glen Way)	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 8: Watercraft on Loch Ness	Effect on visual amenity	Minor Adverse	N/A (All mitigation is embedded)	Minor Adverse	Not Significant	No change
Viewpoint 9: Urquhart Castle	Effect on visual amenity	Moderate Adverse	N/A (All mitigation is embedded)	Moderate Adverse	Not Significant	No change
Viewpoint 10: Layby on A82	Effect on visual amenity	Major Adverse	N/A (All mitigation is embedded)	Major Adverse	Not Significant	No change
Viewpoint 11: Local road near Caisteal an Dunriachaidh	Effect on visual amenity	Major Adverse	N/A (All mitigation is embedded)	Major Adverse	Significant	No change

Chapter 12 Forestry

There is no residual effects summary table in this chapter

Chapter 13 Archaeology and Cultural Heritage

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
2 – Caisteal an Dunriachaidh fort	Impact on the setting of the asset	Moderate Adverse	No mitigation	Moderate Adverse	Significant	No change
17 – Military Road	Partial loss due to construction of the Headpond.	Minor Adverse	Archaeological excavation and / or watching brief if remains survive	Minor Adverse	Not Significant	No change
18 – Military Road	Partial loss due to works on infrastructure	Minor Adverse	Archaeological excavation and / or watching brief if remains survive	Minor Adverse	Not Significant	No change
22, 98, 101, 122, 125, 126, 140, 146, 151 & 153 – Enclosures and clearance cairns in Dirr Wood	Possible total loss due to construction of Temporary Access and Ancillary Tracks, Compounds and Spillway.	Moderate Adverse	Archaeological excavation and / or watching brief if remains survive	Moderate Adverse	Significant	No change
56 – Loch Ashie Cairnfield	Partial loss of any surviving assets due to Headpond construction	Moderate Adverse	Archaeological excavation and / or watching brief if remains survive	Moderate Adverse	Significant	No change
63 – Loch Ashie field system	Partial loss of any surviving assets due to Headpond construction	Moderate Adverse	Archaeological excavation and / or watching brief if remains survive	Moderate Adverse	Significant	No change
73 – Ashiemoor Cairnfield.	Total loss due to construction of the Headpond	Minor Adverse	Archaeological excavation and / or watching brief if remains survive	Minor Adverse	Not Significant	No change
158-161, 165, 167, 168 & 170 Possible road stone quarry	Total loss due to construction of the Headpond	Minor Adverse	Survey / recording	Minor Adverse	Not Significant	No change
161 Possible road marker with bench mark	Total loss due to construction of the Headpond	No impact	Relocation to new track	No impact	Not Significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
171 Merchants Stone	Total loss due to construction of the Headpond	No impact	Relocation to new track	No impact	Not Significant	No change
172 Wester Drumashie Farm	Total loss due to construction of the new public access	Moderate Adverse	Archaeological excavation and / or watching brief if remains survive	Moderate Adverse	Significant	No change

Chapter 14 Socio-economics

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Access	Access will not be permitted in certain parts of the Development Site during construction.	Moderate	A CTMP and a CEMP will be implemented to manage traffic and reduce effects to amenity.	Moderate	Significant	No change
Local Economy	Potential for increase in local expenditure during the pre-construction phase. Workers may stay in locally available accommodation.	Moderate (Beneficial)	No additional mitigation	Moderate (Beneficial)	Significant (Beneficial)	No change
Ach-Na-Sidhe B&B	Construction activities could produce a disturbance and impact amenity of B&B which may deter visitors.	Moderate	A CTMP and a CEMP will be implemented to manage traffic and reduce effects to amenity.	Minor	Not Significant	Upgraded to moderate adverse and therefore Significant
Loch Ness Fish Farm	In water works at the Tailpond may disturb fish at the fish farm which could impact the business itself.	Moderate	An agreement with the fish farmer owner will be negotiated to move the fish farm. A CTMP will be implemented to manage traffic and maintain access along the B852.	Minor	Not Significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Local Community	No direct impacts to communities are predicted. Views of construction will not change day to day activities.	Minor	A CTMP and a CEMP will be implemented to manage traffic and reduce effects to amenity.	Negligible	Not Significant	Upgraded to minor adverse and therefore is Not Significant
Accommodation	On-site accommodation could impact on local community.	Minor	A CTMP and a CEMP will be implemented to manage traffic and reduce effects to amenity.	Minor	Not Significant	No change
Local Job Market	Potential for the creation of local jobs.	Minor (Beneficial)	Meet the Developer Day or similar even to inform local businesses about potential opportunities during construction.	Minor (Beneficial)	Not Significant	No change
Visitor Attractions	Views of construction from visitor attractions could impact amenity and deter visitors.	Minor	No additional mitigation	Minor	Not Significant	No change
Tourist Services	The increase of personnel working in the area could reduce the accommodation available to tourists.	Moderate	No additional mitigation	Minor	Not Significant	No change
Lochs	Small portion of Loch Ness will be unavailable for recreational activities during construction.	Minor	A CTMP and a CEMP will be implemented to manage traffic and reduce effects to amenity.	Minor	Not Significant	No change
Recreation Routes						
Kindrummond to Dirr Wood Highland Council Core Path (IN12.04)	IN12.04 will be partially closed for the duration of the construction period. It will be diverted via Diversion 1 to join up with IN12.05, allowing access through the Development Site for the duration of the construction period.	Minor	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Minor	Not Significant	Upgraded to moderate adverse and therefore Significant
The Drumashie Moor Highland Council Core Path (IN12.05)	IN12.05 will be partially closed during construction. It will be diverted via both Diversion 1 and Diversion 2 for the duration of the construction period.	Minor	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Minor	Not Significant	Upgraded to moderate adverse and therefore Significant

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
The South Loch Ness Trail	The South Loch Ness Trail will be partially closed for the duration of the construction period. It will be diverted via Diversion 3 allowing access through the Development Site for the duration of construction.	Minor	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Minor	Not Significant	No change
The Trail of the Seven Lochs	The Trail of Seven Lochs will be partially closed for the duration of the construction period. It will be diverted via Diversion 1 allowing access through the Development Site for the duration of construction.	Minor	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Minor	Not Significant	Upgraded to moderate adverse and therefore Significant
National Cycle Route 78	The National Cycle Route 78 will be partially closed for the duration of the construction period. It will be diverted via Diversion 3 allowing access through the Development Site for the duration of construction.	Moderate	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Minor	Not Significant	No change
C1064	The C1064 will be permanently realigned prior to construction. This realignment will include the provision of a path which can be used for recreation. It will be available to recreation users throughout the construction period.	Negligible	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Negligible	Not Significant	Upgraded to minor adverse and therefore Not Significant
B862	There will be increased traffic during construction.	Negligible	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Negligible	Not Significant	No Change
Local Path Network	Some local paths will be retained and will be open to users during construction. Other will be closed for duration of the construction period and some will be closed temporarily during construction. The local paths	Minor	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Minor	Not Significant	Upgraded to moderate adverse and therefore Significant

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	which are in the location of the head pond will be closed permanently.					
An Torr Highland Council Core Path (IN12.01)	No direct impact as a result of construction activities. Diversion 3 will allow users to be able to access IN12.01 from IN17.01 during construction. Diversion 3 is shown on Figure 14.1.3 (Appendix 14.3 Volume 5).	Negligible	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Negligible	Not Significant	No Change
Fair Headed Lad's Pass Core Path (17.01)	No direct impact. Diversion 3 will allow users to be able to access 17.01 from IN12.01 during construction. Diversion 3 is shown on Figure 14.1.3.	Negligible	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Negligible	Not Significant	No Change
Great Glen Way	No direct impact as a result of construction activities.	Negligible	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Negligible	Not Significant	No Change
Great Glen Canoe Trail	No direct impact as a result of construction activities.	Negligible	No additional mitigation from Outline Access Management Plan or embedded mitigation.	Negligible	Not Significant	No Change
Local Events	Races and other outdoor events which use local recreation routes could be impacted by construction activities.	Minor / Negligible	A CTMP and a CEMP will be implemented to reduce effects to amenity.	Minor / Negligible	Not Significant	Upgraded to moderate adverse and therefore Significant

Chapter 15 Traffic and Transport

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Severance	Increase in the amount of traffic on the roads used by construction vehicles resulting in perception that a road is	Minor Adverse	Use of excess material for Landscape Embankment will reduce HGV trips.	Negligible	Not Significant	

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	less safe to cross or that parts of a settlement or property become isolated		Use of concrete batching plants to significantly reduce the number of HGV trips. HGVs to follow defined routes to and from the Development Site.			Upgraded to major adverse and therefore Significant
Increased journey time for non-construction traffic	Increase in slow moving HGV traffic which results in a convoy of vehicles being unable to overtake the HGV. This in turn leads to increased journey times, driver frustration and drivers taking unnecessary risks	Minor Adverse	Instruct HGV drivers to stop at suitable locations allowing vehicles to pass. Use of concrete batching plants to significantly reduce the number of HGV trips. Use of excess material for Embankment enhancement and Landscape Embankment will reduce HGV trips. Detailed CTMP. Use of the Caledonian Canal to import pre-cast tunnel lining sections from supplier.	Negligible	Not Significant	Upgraded to major adverse and therefore Significant
	Traffic management associated with abnormal load deliveries may involve local road closures and local diversion of traffic	Major Adverse	Escort vehicles to accompany abnormal load. Abnormal load delivery to be programmed in such a way so as to cause minimal disruption i.e. at night or during off-peak hours. Implementation of the finalised CTMP.	Minor Adverse	Not Significant	No change

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Traffic Increase due to site workers	Site workers travelling to the Development Site by personal vehicle will increase the volume of traffic on the local road network which may cause delay to other road users	Major Adverse	Construction Contractor will organise mini-bus services to facilitate the movement of site workers from accommodation areas to the Development and encourage car sharing. Implementation of the CTMP	Minor Adverse	Not Significant	No change
			On-site accommodation to be used to house site workers.			
Pedestrian Delay	Increase in the amount of traffic on the routes used by vehicles associated with the construction phase resulting in increased perception of danger when travelling on the Study Network	Minor Adverse	Use of excess material for Embankment enhancement and Landscape Embankment will reduce HGV trips.	Negligible	Not Significant	Upgraded to major adverse and therefore Significant
Pedestrian intimidation			HGVs to follow defined routes to and from the Development Site which will be signposted.	Minor Adverse		
Pedestrian loss of amenity			Instruct HGV drivers to abide by advisory speed limit in local area.	Minor Adverse		
Road accidents and safety	Increase in slow moving HGV traffic which results in a convoy of vehicles being unable to overtake the HGV. This in turn leading to increased journey times, driver frustration and drivers taking unnecessary risks.	Minor Adverse	Use of excess material for Embankment enhancement and Landscape Embankment will reduce HGV trips.	Negligible	Not Significant	Upgraded to major adverse and therefore Significant
			HGVs to follow defined routes to and from the Development Site which will be signposted.			
	Abnormal loads may need to overrun footways to negotiate some junctions along the delivery route to site.		Educate HGV drivers to stop at suitable locations allowing vehicles to pass.			
			Abnormal load vehicle speeds will be low and will be escorted.			

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	Adverse weather could result in poor road conditions which could lead to road traffic accidents occurring.		Footways will be closed on a temporary basis if abnormal loads require incurring onto pedestrian space. Winter maintenance will be carried out on public roads which will be used by construction traffic to maintain road user safety.			
Air Pollution	An increase in traffic has the potential to cause environmental and ecological damage due a reduction in air quality	Negligible	Use of excess material for Embankment enhancement and Landscape Embankment will reduce HGV trips. Contractors will organise mini-bus services to facilitate the movement of site workers from accommodation areas to the Development and encourage car sharing.	Negligible	Not Significant	Upgraded to moderate adverse and therefore Not Significant
Dust and Dirt	Construction traffic travelling to, from and throughout the Development is likely to disturb the surface of the access tracks which will produce dust and dirt. Should a large quantity of dirt be spread over a public road, vehicles could lose traction could lead to road traffic accidents and an overall reduction in road user safety.	Moderate Adverse	Implementation of the CEMP. Wheel washing and road cleaning will be carried out at public road crossings and site access points.	Minor Adverse	Not Significant	Upgraded to moderate adverse and therefore Significant

Chapter 16 Noise and Vibration

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
Occupants of Residential Dwellings	Disturbance / annoyance due to temporary elevated noise levels from surface plant associated with all proposed construction works	The majority of the proposed works will result in noise effects of negligible significance. The only exception is the road construction activities which result in major adverse effects at R2 (Ach Na Sidhe), R9 (Ardmor), and R8 (Park Cottage) and minor adverse effects at R6 (Athbhinn).	Implementation of BPM and barriers where required Noise will decrease over distance and as the works enter the Headpond at depth.	Localised, temporary, minor adverse	Not Significant	Not Significant
	Disturbance / annoyance due to temporary elevated noise levels from surface plant associated with Headpond construction only	At the majority of the receptors, the Headpond construction works will result in noise effects of negligible significance. The only exception to this is moderate adverse effects at R2 (Ach Na Sidhe) and minor adverse effects at R3 (West Town) and R7 (Midtown).	Implementation of BPM and construction of earth bunds	Localised, temporary, minor adverse.	Not Significant	Not Significant
	Disturbance / annoyance due to temporary vibration from surface plant except piling	Vibration levels at receptors are anticipated to be imperceptible hence effects are negligible.	Implementation of BPM	Negligible	Not Significant	Not Significant
	Disturbance / annoyance due to temporary vibration from piling works	Vibration levels at receptors are anticipated to be below the threshold at which adverse complaints become likely hence worst-case effects are minor adverse.	Implementation of BPM and vibration monitoring during trial drives	Localised, temporary, minor adverse	Not Significant	Not Significant
	Disturbance / annoyance due to temporary groundborne noise and vibration from tunnelling	Groundborne noise and vibration levels at receptors are anticipated to be below the threshold at which adverse complaints become likely hence worst-case effects are minor adverse.	Vibration monitoring at commencement of works Groundborne noise and vibration levels at receptors will decrease with distance.	Localised, temporary, minor adverse	Not Significant	Not Significant

Receptor	Description of Effect	Effect	Additional Mitigation	Residual Effects	Significance	Updated FEI Significance
	Disturbance / annoyance due to temporary air overpressure and vibration from blasting	Allowable MICs will be determined to provide a 90% confidence level that the air overpressure and vibration levels at receptors will not exceed acceptable levels at receptors; hence worst-case effects are minor adverse.	Implementation of BPM and monitoring during trial blasts Air overpressure and vibration levels at receptors will decrease with distance.	Localised, temporary, minor adverse	Not Significant	Not Significant
Underground Services	Damage due to vibration from piling or tunnelling	Vibration levels are not anticipated to result in damage hence effects are Negligible.	None specific	Negligible	Not Significant	Not Significant
	Damage due to vibration from blasting	Allowable MICs will be determined to provide a 90% confidence level that the vibration levels will not exceed the limit at which damage may occur to underground services; hence effects are Negligible.	None specific	Negligible	Not Significant	Not Significant