



Chapter 9 – Schedule of Mitigation and Summary of Residual Effects

Dupplin Solar EIA Report

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Acronyms and Abbreviations

BPP	Bird Protection Plan
CAR	Controlled Activities Regulations
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
DEMP	Decommissioning Environmental Management Plan
PKC	Perth and Kinross Council
EIA	Environmental Impact Assessment
ECow	Ecological Clerk of Works
HGV	Heavy Goods Vehicle
IOF	Important Ornithological Feature
IEF	Important Ecological Feature
OBEMP	Outline Biodiversity and Enhancement Management Plan
SEPA	Scottish Environment Protection Agency
SPP	Species Protection Plan
SWMP	Site Waste Management Plan



9. Schedule of Mitigation

9.1 Introduction

- 9.1.1 The Schedule of Mitigation provides a summary of good practice, mitigation measures and commitments that have been proposed throughout the Environmental Impact Assessment (EIA) Report to prevent, reduce or offset the effects of the Proposed Development on the environment.
- 9.1.2 Good practice and mitigation measures have been integral to the design evolution of the Proposed Development as described in **Chapter 2: Site Description and Design Iterations**. A series of environmental and technical constraint-led design reviews were undertaken to minimise potential significant environmental impacts prior to finalising the design of the Proposed Development. Areas and constraints which were examined in depth include landscape and visual; ecology and biodiversity; cultural heritage and archaeological constraints; agricultural land; transport and site access, hydrology, geology and hydrogeology; and glint and glare.

9.2 Schedule of Mitigation

- 9.2.1 The mitigation measures and best practice commitments in **Table 9-1** are those which would be applied prior to construction, during construction, and during operation of the Proposed Development.
- 9.2.2 A number of embedded measures have been applied throughout the EIA, which are detailed throughout each chapter.



Table 9-1: Schedule of Mitigation and Commitments

EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
Chapter 3: Proposed Development	Pre-and during Construction (CEMP)	<p>Construction Environmental Management Plan</p> <ul style="list-style-type: none"> • A CEMP will be prepared prior to the commencement of construction and will detail measures undertaken to avoid or mitigate any potential effects associated with key construction activities. These will reflect and expand upon measures identified in the EIA Report, and will be agreed with the planning authority, SEPA (Scottish Environment Protection Agency), NatureScot and other stakeholders where appropriate. • The CEMP will form an overarching document for all Site environmental management requirements and will typically include: <ul style="list-style-type: none"> ○ An Environmental Incident Response Plan; ○ a CTMP; ○ a Site Waste Management Plan (SWMP); and ○ a Water Quality Monitoring Plan. • An outline CEMP is provided as Technical Appendix 3.1. In acknowledgement that the CEMP is a live document, that would evolve throughout the construction of the Proposed Development, only the principles of the CEMP are outlined at this stage. • Performance against the CEMP would be monitored by the Applicant, the ECoW and the Principal Contractor throughout the construction period. 	Developer / Contractor / ECoW	CEMP
	Construction (Access)	<p>Site Access</p> <ul style="list-style-type: none"> • Access to the Site will be via the northbound carriageway of the A9, and off the C411 Roman Road as shown in Figure 	Developer / Contractor	CEMP/ CTMP



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		<p>2.3: Site Layout (Chapter 2: Site Selection and Design Iteration).</p> <ul style="list-style-type: none"> This access would be used by all construction vehicles, it is understood that abnormal indivisible load (AIL) vehicles are not anticipated to be required and an AIL assessment was not therefore undertaken. 		
	Construction (Construction Hours)	<p>Construction Hours</p> <ul style="list-style-type: none"> The construction working hours for the Proposed Development will be 07:00 to 19:00 Monday to Friday and 07:00 to 13:00 on Saturdays. No working is proposed on Sundays or public holidays. The Principal Contractor will keep local residents informed of the proposed working schedule, where appropriate, including the times and duration of any abnormally noisy activity that may cause concern. 	Developer / Contractor	Planning Condition / CTMP
	Construction (Waste)	<p>Site Waste Management Plan</p> <ul style="list-style-type: none"> A SWMP would form part of the CEMP and will be developed for implementation during construction as discussed in the outline CEMP (Technical Appendix 3.1). This will outline the types and quantities of wastes arising during construction and how best to manage them. 	Developer / Contractor	CEMP
	Construction (ECoW)	<p>Ecological Clerk of Works</p> <ul style="list-style-type: none"> An ECoW would be appointed to undertake Site surveys, monitor the construction activities and performance against the CEMP. The ECoW would be employed throughout the duration of the construction period, to ensure environmental interests are safeguarded, although this may not be a full-time role throughout. 	Developer / ECoW	CEMP



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
	Post Construction (Restoration)	Access Tracks <ul style="list-style-type: none"> At the end of the construction period the edges of all new tracks will be restored using Site-sourced turf or seed-bank material. 	Developer / Contractor	CEMP
Chapter 5: Landscape and Visual	Design	<p>The principal means of mitigation in relation to landscape and visual is embedded in the layout and design of the Proposed Development.</p> <p>Mitigation was built into the design via the following means:</p> <ul style="list-style-type: none"> Land clearance and occupation would be limited to necessary areas only to minimise the potential impact on the local landscape fabric and focus the proposed infrastructure into a confined geographic area. The secure compound (incorporating Private Substation, Control Room & Welfare, Storage Room, and DNO Room, enclosed by palisade fencing) would be located in the south west corner of the Site adjacent to areas of forestry and woodland at the A9 corridor. The solar array has been pulled back from the northern edge of the Site to increase the separation distance from residential properties in the nearby landscape. In addition, there are separation buffers at the south east boundary with the A9 and eastern edge with the minor road. Proposed planting would incorporate the creation of new parcels of native scrub and hedgerow habitat around peripheral parts of the Site. The species mix would be native broadleaves, incorporating Oak Willow and Rowan, or similar approved. New areas of mixed native hedging, with interspersed hedgerow trees, would provide further containment of the Site and break up views of the solar arrays. 	Developer / Contractor	BEMP / LEMP



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		<ul style="list-style-type: none"> • New hedgerows will provide enhanced green links with the proposed areas of woodland edge habitat, and the adjoining agricultural landscape. The hedgerow species would be native, comprising Hawthorn, Blackthorn, Hazel and Geulder Rose or similar. • The landscape management regime would initially allow the hedgerow to grow. Thereafter, the management regime would seek to maintain an eventual hedgerow height of approximately 2 m. The trees / woodland edge would be left to grow to their full height. • Creation of species-rich grassland and wildflower meadow within the Site would further soften the appearance of the Proposed Development and provide additional enhancement to local biodiversity. • In addition, large areas of wildflowers are proposed at the eastern edge of the site, along with scrub and native hedgerows. • Stock fencing would also be included to support the potential for a low input conservation grazing regime, enabling controlled vegetation management while maintaining enclosure security. • Maintain recreational amenity of estate tracks which are used by people for access through the Site. 		
	Pre-Construction (Appearance)	<p>Infrastructure</p> <ul style="list-style-type: none"> • The exact colour of the key infrastructure components would be agreed with PKC prior to the construction of the Proposed Development – however this is assumed to be a dark agricultural green RAL colour for larger items. 	Developer	Planning Condition
	Construction	Measures that will be taken to mitigate landscape and visual effects during construction include:	Developer / Contractor	CEMP



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	(Landscape and Visual Mitigation)	<ul style="list-style-type: none"> • Minimised ground excavation: The panels would be mounted upon a prefabricated alloy metal frame. The module frames will be anchored to the ground via steel piles, which will be driven approximately 1.5 m- 3 m below ground. The framed mounting system would be pile-driven. Therefore, no foundations would be required. • Areas of new hardstanding would be limited to the substation, communication building and inverter foundations. • Existing vegetation along the Site’s perimeters will be retained and enhanced with new and appropriate planting where vegetation is presently sparse. This will avoid direct landscape effects and reduce visibility of the Proposed Development. • Vegetation removal will be kept to a minimum as far as practicable. • No PRowS will be stopped up or diverted (temporarily or permanently). • CCTV facilities will be located carefully considered in order to minimise visual / landscape impact. Where possible, cameras pointing in two directions will be placed on the same post. Slim, galvanised metal posts will be utilised, and the colour of cameras will be light grey in order to reduce their visibility. • Control of after-dark construction lighting to minimise effects on sensitive views. • Maintenance of tidy and contained construction compounds and laydown area. • the spreading of overburden and reseeding and planting on areas to be restored as soon as possible after sections of work are complete. 		



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	Post-Construction / Operational	<ul style="list-style-type: none"> • Installation of embedded enhancement and mitigation landscape via the Landscape Enhancement & Mitigation Plan (LEMP). • Landscape enhancement and mitigation measures require residual maintenance to ensure establishment and longevity through the operational stage of Proposed Development. • A Landscape Management Plan (LMP) – to be approved by PKC – would be conditioned to ensure that the intent of the LEMP is met. • Following approval, and per condition, it would be the requirement and responsibility of the developer to ensure that a Landscape Maintenance Contract is established for the duration of operation of the Site. 	Developer / Contractor	LMP / LEMP / CEMP
Chapter 6: Ecology and Ornithology	Pre-Construction	<p>Pre-Construction Surveys and Actions</p> <ul style="list-style-type: none"> • The ECoW or other suitably qualified and experienced ecologist will carry out pre-construction surveys for relevant protected species. In line with NatureScot guidance, these pre-construction surveys would take place no more than three months before commencing works (including facilitating works such as vegetation clearance). Surveys shall take place no less than six weeks prior to construction to allow time for potential licence applications and thus avoid possible project delays. • A Species Protection Plan (SPP) will be produced for key target species and agreed prior to commencement of construction and implemented as required. SPPs will be prepared for bats, badger, red squirrel, pine marten, brown hare and herptiles. • An INNS management plan, informed by an INNS flora walkover survey should be produced which will outline 	Developer / Contractor / ECoW	SPP / INNS Management Plan



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		measures to avoid the spread of INNS (particularly, Japanese knotweed <i>Fallopia japonica</i>) during construction phase.		
	Construction (ECoW)	Ecological Clerk of Works <ul style="list-style-type: none"> A suitably qualified and experienced Ecological Clerk of Works (ECoW) should be employed to oversee construction activities and ensure that all mitigation measures are properly implemented. Where any person on Site identifies any field signs/evidence or a sighting of what they believe to be of a protected species (i.e., badger, red squirrel, breeding birds, reptiles, amphibians) within the designated working area, they shall notify the ECoW immediately. If these signs are present within a working area, works will be stopped immediately until further information can be gathered. In the unlikely event that a protected species is injured or killed, or a burrow is damaged, the ECoW will be notified immediately. The ECoW will attend the Site and make a written and photographic record, including details of the time, location and personnel involved in the incident. This information will be communicated to NatureScot within 24 hours. 	Developer / Contractor / ECoW	CEMP
	Construction (ECoW - Potential GWDTE Habitats)	Measures to Protect Potential GWDTE <ul style="list-style-type: none"> ECoW to ensure that no plant tracks across these habitats or other direct impacts (e.g., storage of materials) occurs on these habitats. This may include establishing a zone around them using tape or another marker to ensure that no vehicles cross them. 	Developer / Contractor / ECoW	CEMP
	Construction (ECoW - Bats)	Measures to Protect Bats	Developer / Contractor / ECoW	CEMP



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		<ul style="list-style-type: none"> • An ECoW will be present where construction activities that have the potential to result in excessive noise and/or vibration are located near trees with the potential to support roosting bats or buildings, a sound barrier should be used to avoid disturbance to roosting bats. A disturbance buffer of up to 50m should also be put into place. • Mitigation in relation light disturbance to bats should include: <ul style="list-style-type: none"> ○ Avoid lighting in areas where bats are known to forage, or commute; ○ Use the lowest light levels necessary for safety and functionality; ○ High-intensity lights should be avoided with lighting directed away from foraging areas; ○ Hoods, or cowls to control light spill should be used to avoid light spill; ○ Lighting should be limited during peak bat activity times, typically from dusk to dawn; ○ Warm white or amber lights should be used, as these are less disruptive to bats compared to blue or white lights. 		
	Construction (Protected Species)	<p>Protected Species</p> <ul style="list-style-type: none"> • The Species Protection Plan (SPP) will detail measures to safeguard protected species known to be in the area and will include pre-construction surveys (complimenting the seasonality of the construction start date), as well as ensuring the use of best practice measures to minimise ecological impact during all construction activities • The SPP will describe the process to be followed in the case that new protected or notable species are recorded on site that 	Developer / Contractor / ECoW	SPP / CEMP



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		<p>will therefore also need to be protected during construction works</p> <ul style="list-style-type: none"> • the SPP will ensure that working methods shall be adopted to minimise the chance of protected species being killed or injured during construction works. An ECoW shall be present during Site clearance works. • Open excavations will be covered at the end of each working day. A method of escape (e.g., plank) will be placed in all excavations or trenches so animals can vacate the area overnight. Should any animals be trapped in an excavation, the ECoW shall be immediately notified. • Open pipes will be capped at the end of each day to prevent animals from accessing them and potentially becoming trapped. • All machinery and plant will be checked each morning for the presence of animals in the unlikely event that an individual is using them for resting. • A maximum speed limit will be established on the site to reduce the likelihood of injury and/or mortality to individuals. • No works will be undertaken during hours of darkness unless necessary. Should working during darkness be required, the use of artificial lighting will be minimised where possible and directional lighting and/or screening will be used to avoid illuminating watercourses or other sensitive areas (e.g., otter holts or badger setts). 		
	Construction (Nesting Birds)	<p>Nesting Birds</p> <ul style="list-style-type: none"> • For all works undertaken during the nesting bird season (March to August, inclusive), the ECoW will undertake nesting bird checks no more than 72 hours (preferably within 24 hours) in advance of works to identify any constraints and to ensure 	Developer / Contractor / ECoW	CEMP



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		<p>that no disturbance will occur. If necessary, site works should be stopped within a species-specific buffer to be outlined by the ECoW until chicks have fledged and dispersed from the area. It should be noted that whilst the main bird breeding season runs between March and August some birds can nest at any time of year, including woodpigeon <i>Columba palumbus</i>, and protections for nesting birds must be implemented regardless of the time of year.</p> <ul style="list-style-type: none"> Where necessary, disturbance buffers around nesting birds will be established, in line with published guidance (Goodship, 2022). 		
	Construction (Wintering Geese)	<p>Wintering Geese</p> <ul style="list-style-type: none"> For works undertaken between October and April, inclusive, a 200m disturbance buffer will apply for geese around the active working area(s) (and not the full Site Boundary). The ECoW will be suitably empowered to halt or postpone works if necessary to avoid impacts to geese. The ECoW will record all decisions made and actions taken regarding geese and these records will be made available to NatureScot and the Energy Consents Unit following construction. 	Developer / Contractor / ECoW	CEMP
	Post Construction (Enhancements)	<p>Biodiversity Enhancements - Grassland Creation</p> <ul style="list-style-type: none"> Managed grassland for sward height and species diversity is proposed within retained areas of the Site surrounding the PV modules. Most of the Site is currently being utilised for crop production, in these areas, grassland will require seeding and creation. Grassland creation will involve the following steps: Topsoil preparation (i.e. levelling) or removal: to reduce soil depth to 20cm, which is preferred for wildflowers Seeding: 	Developer / Contractor / ECoW	BEMP



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		<ul style="list-style-type: none"> ○ the ploughed areas will be sown with local provenance wildflower seed which will contain at least 10 species per m2 (the minimum number required to be classified as lowland meadow in the UK Habitat Classification (UKHab). ○ A general guide for grass-wildflower seed mixes is to sow at a rate of 3 - 5g per m². ○ A grassland mix that is suited to well-drained, loamy soils in open areas, is recommended, such as Scotia Seeds Mavisbank Mix (SCM1) (Annex D). ○ Yellow rattle <i>Rhinanthus minor</i> (a semi-parasitic species which feeds off the nutrients in the roots of nearby grasses) will be included in the seed mix, in order to reduce the vigour of dominant grasses and encourage desirable species. ○ Seeding can be conducted in either spring (March to May) or autumn (Mid-August to late September). ● Seed rolling: after seeding the soil should be rolled or trampled to increase contact between the seeds and the soil. <p>Any scrub present in the grassland should be removed, unless in an area designed for scrub presence. Removal should allow for environmental variables, including weather and breeding birds.</p> <p>Grassland Enhancement</p> <p>It is proposed to enhance the areas of existing grassland within the Site, primarily modified grasslands (g4) through seeding and habitat management:</p> <ul style="list-style-type: none"> ● Land preparation: the turf will either be stripped or rotovated to break up the turf and allow access for seeding. ● Seeding: as per above Objective. 		



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		<p>Any scrub present in the grassland management should be removed, unless in an area designed for scrub presence. Removal should allow for environmental variables, including weather and breeding birds.</p> <p>Grassland Management</p> <p><u>Conservation Grazing -</u></p> <p>It is proposed to graze the grassland beneath the solar arrays to manage the wildflower meadows. For optimal results (to maintain species diversity), the grazing will be low density and at a level to benefit biodiversity.</p> <p>Sheep will be sourced/rotated to graze the area for maximum benefits to biodiversity and the community structure of grasslands.</p> <p>These areas should be grazed between mid-September and mid-March, leaving the meadow ungrazed during the middle of the season (late March to August) to allow plants to flower. Heavier grazing over a very short period of time is preferable to light grazing over a long period as there will be less selection of particular plants by the animals.</p> <p><u>Manual / Mechanical Management:</u></p> <p><u>Mowing -</u></p> <ul style="list-style-type: none"> Fields in the north, east and south of the Site will be set aside as wildflower meadows and may not be subject to conservation grazing. If required, the meadows will be cut once a year at the end of the growing season (late August). Arisings would be removed in order to prevent short-term nutrient enrichment, which in turn promotes higher diversity as highly competitive species (e.g. grasses) are less able to outcompete less competitive species (e.g. wildflowers). Removing the arisings also exposes the soil surface, thus providing light for seeds to germinate and grow. The arisings 		



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		<p>will be left in situ for a few days to dry out and facilitate seeds being shed from capsules.</p> <ul style="list-style-type: none"> • It is beneficial to leave ungrazed strips along the edges of the meadows, as a foraging resource for insects, enabling late flowering species to set seed and provide shelter for other wildlife. • The aim in all situations is to provide a level of grazing that allows plants to grow from early spring, flower in May and June and then set seed, but which keeps highly competitive vegetation under control through grazing. <p><u>Overseeding / plug-planting -</u></p> <ul style="list-style-type: none"> • If monitoring results indicate initial establishment attempts were not as successful as desired, over-seeding or plug planting to supplement established plants will be undertaken. <p><u>Weed Control -</u></p> <ul style="list-style-type: none"> • Control of weed species such as ragwort <i>Senecio jacobaea</i>, creeping thistle <i>Crisium arvense</i>, and spear thistle <i>C. vulgare</i> may be undertaken if they occur at high abundance, but only hand pulling or cutting of weed species will be used. • It should be noted that common nettle <i>Urtica dioica</i> has high value for some invertebrate species, such as the caterpillar stage of the peacock <i>Aglaia io</i> and small tortoiseshell <i>A. urticae</i> butterflies. While it may be removed where it risks outcompeting other species and reducing species diversity, consideration will be given to retaining areas of nettle to promote invertebrate populations. <p><u>Fertilisers and Pesticides -</u></p> <p>The management of the habitat areas is intended to promote biodiversity and therefore use of fertilisers and pesticides is contrary to the aims of the OBEMP. No fertilisers or pesticides will</p>		



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		<p>be used within the grasslands or within close proximity, to avoid creating nutrient-rich conditions that would result in a loss of less competitive plant species, and to ensure protection of the invertebrate diversity.</p> <p>Enhancement of Aquatic Habitat</p> <p>The SuDS Pond and ditches/field drains will be fed by surface water runoff.</p> <p>It is proposed riparian scrub is to be planted surrounding the SuDS feature and existing ditches. The following species are proposed:</p> <ul style="list-style-type: none"> • Bog myrtle <i>Myrica gale</i>; • Grey willow <i>Salix cinerea</i>; and • Eared willow <i>Salix aurita</i>. <p>It is recommended that the riparian scrub is under seeded with a mix that is tolerant to being occasionally flooded or waterlogged. A suitable mix for this location would be a Wet Meadow Mix (SCM2) www.scotiaseeds.co.uk . Seeding would be conducted as follows:</p> <ul style="list-style-type: none"> • To reduce potential risk of erosion if soil is left bare it is recommended that soil is prepared and sown in the spring (March to June); • Ensure ground is free of vegetation, then firm and rake to create a seedbed; • Aim to let the area settle for four to six weeks to allow any weed seeds to germinate then remove before sowing seeds; • Seed is to be sown in the spring or autumn at a rate of 3g per square metre using wet meadow mix (SCM2). Bulk up the seed with an inert carrier such as sand to make distribution easier. The seed must be surface sown by machine or broadcast by hand; and • Tread or roll in seed lightly to produce a firm surface. 		



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		<p>Should herbicides be deemed necessary, only those cleared for aquatic use may be used in or beside water. These must be used under strict control and in accordance with the instructions printed on the product label.</p> <p>The design will include features within the margins such as log piles, rock stacks or varied substrate to provide diversity to topography and provide increased habitat opportunities for invertebrates.</p> <p>Creation and Enhancement of Mixed Woodland, Scrub and Hedgerows</p> <p>Mixed native tree planting (comparative to UKHab 'other woodland, mixed' (w1h)) is proposed in the north of the Site, along the southern Site boundary (Landscape Mitigation Plan). The total area of mixed native woodland planting is 0.41ha. Blocks of woodland are located on the Site boundary to enhance connectivity between existing blocks of woodland in the wider landscape and to have maximum screening benefit.</p> <p>Species should include primarily broadleaved species, with Scot's pine to provide both screening and biodiversity enhancement value, priority should be given to the use of native species appropriate to the ground conditions. Stock of local provenance should be used where practicable.</p> <p>Species proposed include:</p> <ul style="list-style-type: none"> • Scots pine <i>Pinus sylvestris</i>; • Silver birch <i>Betula pendula</i>; • Oak <i>Quercus robur</i>; • Field maple <i>Acer campestre</i>; • Hawthorn <i>Crataegus monogyna</i>; • Wild cherry <i>Prunus avium</i>; and 		



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		<ul style="list-style-type: none"> • Rowan <i>Sorbus aucuparia</i>. <p>Tree tubes and stakes should be used to protect trees from deer herbivory; sustainable or non-plastic tree tubes should be used to reduce plastic waste/pollution and removal at the right time is important to permit healthy tree growth, ensure protection if measures fail, and avoid waste.</p> <p>A suitable woodland meadow mix would be of local provenance and used within the understory of all proposed woodland planting areas. It is recommended that the meadow is seeded with a mix that is tolerant to dappled or limited light and sown at a rate of 3.0g / m². A suitable mix for this location would be a Woodland Meadow Mix (SCM3) (www.scotiaseeds.co.uk , see LMP for full details).</p> <p>Areas determined for planting shall include a moderate (1,600 stems per ha) density following appropriate guidance, and will include seeding of the understory with a woodland meadow mix.</p> <p>Native Scrub Planting / Enhancement</p> <p>Scrub creation is proposed within areas bordering existing woodland and proposed for woodland planting. These will cover a total area with native hedgerow of 3.40 ha. Scrub planting should prioritise native species and use plants appropriate to the ground conditions.</p> <p>Proposed species include:</p> <ul style="list-style-type: none"> • Blackthorn <i>Prunus spinosa</i>; • Guelder rose <i>Viburnum opulus</i>; • Grey willow <i>Salix cinerea</i>; • Spindle <i>Euonymus europaeus</i>; and • Common dogwood <i>Cornus sanguinea</i>. 		



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		<ul style="list-style-type: none"> • Hawthorn is also present within the native tree planting. There will be at least three native species, and no single species shall account for >75% of the cover. • The scrub will be planted in a way aimed to create glades/sheltered edges within the scrub, to provide sheltered areas for invertebrates and other wildlife. • Management of scrub patches will retain grassy ecotones between the scrub and surrounding habitats, by avoiding mowing directly up against scrub patches. <p>Native Species-rich Hedgerow Planting</p> <p>Native hedgerow planting is proposed along the western, eastern and southern Site boundary as linear features (included with good condition scrub) across an approximate area of 3.40 ha. The hedgerow should be planted in a double staggered row configuration to provide an increased shelter area for fauna. Hedgerow planting should prioritise native species and use plants appropriate to the ground conditions. Single-species hedgerows will be avoided, with a mix of species using stock of local provenance where practicable, which includes:</p> <ul style="list-style-type: none"> • Hawthorn; • Guelder rose; • Hazel <i>Corylus avellana</i>; • Holly <i>Ilex aquifolium</i>; • Elder <i>Sambucus nigra</i>; and • Blackthorn. <p>In areas where defunct hedgerow and individual trees exist along proposed hedgerow planting areas, current trees would be retained, and infill planting will be conducted where necessary, this</p>		



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		<p>will help maintain established trees in the landscape. This will provide increased sheltering areas for fauna and enhance connectivity within the landscape between existing blocks of woodland and scrub in the wider landscape. Infill planting should be conducted outside the breeding bird season where possible, taken to be mid-March to late July in central Scotland.</p> <p>Following the completion of planting, a 75mm layer of bark mulch will be placed around each base. Hedgerows will be maintained at a height of 3.5m.</p> <p>Management of Woodland, Scrub and Hedgerows</p> <ul style="list-style-type: none"> • Where mortality of planting is over 10%, beating up may be required, where dead plants are replaced. Should any particular species show low survival rates, it is recommended that the replacement species is reviewed and a species with high survival likelihood planted. • Tree tubes should be replaced if they are damaged and removed once the plants are mature enough. Weeding of tree tubes may be required. • Detailed management for planting shall be included within a detailed BEMP prior to the construction phase of the Proposed Development. This should specify planting densities, protection measures and short and long-term management. In addition to this, the following management measures shall also be considered: • Where possible, planting will be undertaken between November and March when plants are dormant and avoiding heavy frost; • If planting across the summer period, plants must be watered during the establishment period; 		



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		<ul style="list-style-type: none"> • Unless watering/care is possible, no planting works will be undertaken during the summer; • Trees should also be planted in blocks, instead of rows to create a more natural arrangement; • The tree edges adjacent to areas of grassland should be scalloped to create microclimates within the edge habitat; • Planting will be undertaken during the construction phase and new plants will be protected during works through the installation of barriers as required; and <p>New plants are to be fertilised with a general-purpose fertiliser and watered during dry times within the establishment period of the first year.</p> <p>Provision and Maintenance of Wildlife Boxes/Refugia</p> <p>The number of boxes/refugia indicates that the following will be suitable as a minimum for this Site:</p> <ul style="list-style-type: none"> • 6 small bird boxes; • 2 raptor boxes; • 6 bat roost boxes; and • 4 reptile refugia. <p>Provision and Maintenance of Small Bird Boxes</p> <p>Bird boxes should be placed on existing and retained trees within the Proposed Development.</p> <p>Hole nesting woodland and forest edge birds are likely to benefit from the installation of nest boxes. This will allow them to breed in or near new woodland areas before the woodland matures to an age where natural tree holes are likely to develop and provide safe rest areas for birds utilising the nearby habitats.</p>		



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
		<p>Final decisions on placement should be assessed in the detailed BEMP, following a Site visit by a qualified ecologist and with reference to recommended guidance.</p> <p>Provision and Maintenance of Raptor Boxes</p> <p>Raptor boxes should be placed on existing and retained trees within the Proposed Development or nearest appropriate habitat. Within this part of Scotland, three target species of raptor and/or owl are likely to benefit from the installation of larger “raptor” nest boxes including barn owl <i>Tyto alba</i>, kestrel <i>Falco Tinnunculus</i> and tawny owl <i>Strix aluco</i>. Kestrel will be targeted given their existing presence within the Site. This will allow them to breed in or near areas of new woodland before it matures to an age where cavities, such as tree hollows, have formed. Raptor boxes would be placed at sufficient distances from small bird boxes to prevent a deterrent effect of these structures and near areas of proposed grassland and scrub enhancement/creation. Boxes should be installed at a height of 6-8m with a minimum of 400m between boxes. Final decisions on placement should be assessed in the detailed BEMP, following a Site visit by a qualified ecologist and with reference to recommended guidance. Where trees of appropriate height are not present on Site, trees adjacent to the Site identified would be proposed to be used.</p> <p>Provision and Maintenance of Bat Boxes</p> <p>The installation of bat boxes within existing woodland and/or on retained trees. Boxes should be positioned at a variety of aspects, with clear flight lines to the boxes. Final decisions on placement should be assessed in the detailed BEMP, following a Site visit by a qualified ecologist and with reference to recommended guidance.</p> <p>Provision and Maintenance of Reptile/Amphibian Refugia</p>		



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
		<p>With enhancements proposed to grassland (Goal 1), aquatic habitats (Goal 2) and woodland/scrub/hedgerows (Goal 3) it is likely that the reptile population will increase, as such an increased availability of refugia will help support the population. The artificial refugia must be in place before reptiles enter hibernation (October). The following recommendation is based on guidance . Where possible, sections of drystone wall or rocks that require dismantling/removing will be reused when creating artificial refugia to maintain the character of current features.</p> <p>Generally, artificial hibernacula should be at least 4m long, 2m wide and 1m high, but ideally larger. In general, they should be located in a sunny position, have a long southern aspect, have access points allowing reptiles to enter the structure, be located in suitable foraging habitat and not be prone to flooding. It is often recommended that a pit is dug, and materials partially buried when creating a hibernaculum. The bulk of the hibernaculum can be created using a variety of materials, including timber, brash, tree roots, inert hardcore, bricks, rocks etc. However, materials which will decompose (e.g. plant matter) should not be placed under more enduring matter, such as rocks, to avoid risk of collapse.</p> <p>Turfs should be removed from the footprint of the hibernaculum before construction. These should be retained and replaced over the completed hibernaculum. Loose topsoil could be compacted into any remaining larger cavities, as reptiles will use quite small holes and this may provide some protection against predators (e.g. mustelids) while they are vulnerable during hibernation.</p> <p>Monitoring Methods</p> <p>Detailed monitoring and management prescriptions will be included in the detailed BEMP for each of the enhancement goals listed above. All monitoring would be undertaken by suitably qualified and experienced ecologists. Refer to Outline BEMP for recommendations.</p>		



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
	Operational Mitigation	<ul style="list-style-type: none"> • Panels will be cleaned using de-ionised water where possible, and/or no harmful chemicals will be used. • All vehicles accessing the site will remain on access tracks, where possible, to minimise impacts to habitats and minimise the risk of injury/mortality to individuals. • All vehicles will have spill kits within them in the event of a pollution spill (e.g., oils, fuel). • Lighting schemes for the operational development should be designed to avoid lights pointing at any trees, buildings, or structures with bat roosting potential, following guidance by the Institute of Lighting Professionals (ILP) (2021) and ILP (2023). 	Developer	CEMP
Chapter 7: Cultural Heritage and Archaeology	Embedded	<p>Design</p> <ul style="list-style-type: none"> • The design process has taken into account the known heritage assets within the Site with regards to the potential for direct impact. Avoidance of direct impacts on heritage assets has been a key focus throughout the design process. Following consultation with PKHT and PKC, protection buffers were applied to all undesignated archaeological assets within the red line boundary – essentially designing out-these constraints. Construction works or solar arrays will not be permitted within the buffer areas. 	Developer / Contractor	Planning Condition
	Pre-Construction, Construction	<p>Appropriate mitigation undertaken before and during construction is proposed in the form of:</p> <ul style="list-style-type: none"> • the micro-siting of Proposed Development infrastructure away from sensitive locations; • the fencing off or marking out of heritage assets or features in proximity to construction activity in order to avoid disturbance where possible; 	Developer / Perth and Kinross Council	WSI



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
		<ul style="list-style-type: none"> • a post-application geophysical survey of the Site, in order to determine the extent and location of any unknown prehistoric remains if present, with the full scope of survey to be agreed in consultation with Perth and Kinross Council; and • a proportionate programme of targeted archaeological works, based on the results of this assessment and the post-application geophysical survey, with the scope agreed in consultation with PKC. • a working protocol to be implemented should unrecorded archaeological features be discovered. <p>The precise scope of the mitigation works would be discussed and agreed with PKC Archaeology Service on behalf of the Applicant and the agreed mitigation programme would be documented in an agreed Written Scheme of Investigation.</p>		
	Pre-Construction, Construction	<p>Archaeological Clerk of Works (ACoW)</p> <p>The presence of an experienced ACoW or qualified archaeologist will be required to oversee all groundbreaking works within the Site. The ACoW would also undertake all archaeological monitoring and recording for construction-phase works.</p>	Developer / Contractor / ACoW	CEMP
Flood Risk and Drainage	Pre-Construction, Construction	<p>Erosion & Sedimentation Control Measures</p> <p>The principal means of mitigation in relation to erosion and sedimentation during construction is the adoption of best practice drainage and sediment control measures.</p> <p>The Construction Environmental Management Plan (CEMP) will include methods such as locating stockpiles away from watercourses, seeding or covering exposed soils, using cut-off drains to prevent water ingress into excavations, and directing any</p>	Developer / Contractor / ECoW	CEMP



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
		<p>collected water through settlement lagoons and silt traps before discharge.</p> <p>As part of this mitigation, site-specific drainage designs and pollution control measures will be implemented and monitored by the Ecological Clerk of Works (ECoW).</p>		
	<p>Pre-and during Construction (Fluvial flood risk measures)</p>	<p>Fluvial Flood Risk Measures</p> <p>The principal means of managing flood risk during construction is through appropriate drainage design and surface water management.</p> <p>Drainage systems will be developed to remove sediment and potential pollutants before discharging into watercourses, and on-site drainage will be regularly checked for blockages or build-up of material.</p> <p>As part of this mitigation, section-specific drainage plans will be prepared prior to works commencing, ensuring runoff is controlled to minimise localised flooding risk.</p>	<p>Developer / Contractor</p>	<p>CEMP</p>
	<p>Pre-and during Construction (Water Abstraction)</p>	<p>Water Abstraction</p> <p>The principal means of mitigation in relation to water abstraction are detailed under the appropriate General Binding Rules (GBR) of the Environmental Authorisation (Scotland) Regulations.</p> <p>The GBRs outline the authorisations / parameters required to be met for the abstraction of water from watercourses, lochs, groundwater and coastal and transitional waters etc.</p> <p>If water abstraction is required, an application will be made to SEPA, and if a suitable source is not identified, a bowser will be used instead.</p> <p>Best practice methods for abstraction and water use will be followed in line with regulatory requirements.</p>	<p>Developer / Contractor</p>	<p>CEMP / EASR – General Binding Rules (GBR)</p>



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
	Pre & during construction (Design and Risk)	<p>Design and Geotechnical Risk Register</p> <p>A Design and Geotechnical Risk Register will be developed to capture construction-related risks, including those relating to ground conditions and potential peat instability.</p> <p>This register will inform risk management measures and ensure that appropriate mitigation is built into construction methodologies.</p> <p>Where applicable, these will align with the British Standard Code of Practice for Earthworks (BS6031).</p>	Developer / Contractor	CEMP / Design & Geotechnical Risk Register
	Construction and Operation	<p>Watercourse Crossings</p> <p>A routine system of checks, servicing and maintenance of existing watercourse crossings (of the field drains) will be undertaken. These will include a review and maintenance of drainage measures serving each crossing.</p>	Developer / Contractor	Good practice measures
	Construction (CEMP)	<p>CEMP</p> <p>The implementation of a detailed CEMP will underpin all on-site environmental protection during the construction phase. This document will define roles and responsibilities for managing environmental risks, and will include procedures for sediment control, pollution prevention, drainage, spill response, and storage of hazardous materials.</p> <p>A wet weather protocol will also be included, guiding actions to be taken during periods of heavy rainfall to prevent runoff and sedimentation issues. In extreme cases, work may be temporarily paused until conditions improve.</p>	Developer / Contractor	CEMP
	Construction (Concrete Pouring)	<p>Concrete Pouring</p> <p>Where concrete transfers are required, measures would be adopted at the point of concrete transfer to prevent accidental spillage of liquid concrete and no transfers would be undertaken in</p>	Developer / Contractor	CEMP



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
		proximity to watercourses or areas of standing water; and washout water would also be stored in a washout area before being treated and disposed of or re-used in concrete production.		
	Construction (Buffer distances)	<p>Buffer Distances</p> <p>In accordance with SEPA best practice, all construction works and infrastructure will be located at least 10 m from watercourses. This buffer zone will help prevent sediment or pollutants from entering local streams and protect downstream water quality and ecology.</p> <p>Similarly, there will be no construction works or excavations >1m within 250 m of the Private Water Supply (PWS01) to the north west of the Site. Any site enabling works and fencing will be undertaken at less than 1m depths within the 250 m PWS buffer.</p>	Developer / Contractor	CEMP
	Construction (Good practice measures)	<p>Groundwater Dependent Terrestrial Ecosystem (GWDTE)</p> <ul style="list-style-type: none"> Due to the agricultural nature of the Site, no National Vegetation Classification (NVC) survey has been undertaken. Given the Site’s current agricultural use and underlying low permeability superficial geology, no GWDTE are expected to be present at the Site. No evidence of GWDTEs were recorded as part of the hydrological walkover. However, good practice measures for potential GWDTE will be followed. The ECoW will monitor sensitive locations during construction to ensure that groundwater and surface water interactions remain undisturbed. 	Developer / Contractor / ECoW	CEMP
	Construction & operation (Pollution Prevention measures)	<p>Pollution Prevention</p> <p>Effective pollution prevention will be embedded into both construction and operational activities.</p> <p>Key measures include</p>	Developer / Contractor	CEMP / OEMP



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
		<ul style="list-style-type: none"> • designated refuelling zones at least 50 m from watercourses • foul water generated on-site would be managed in accordance with GPP4 • areas would be designated for production of concrete or washout of vehicles which are a minimum distance of 50 m from a watercourse • washout water would also be stored in a washout area before being treated and disposed of, or re-used in concrete production • if any water is contaminated with silt or chemicals, runoff would not enter a watercourse directly or indirectly prior to treatment; • water would be prevented as far as possible, from entering excavations such as trenches and foundations; • procedures would be adhered to for storage of fuels and other potentially contaminative materials in line with the EASR, to minimise the potential for accidental spillage; and • a plan for dealing with spillage incidents would be designed prior to construction, and this would be adhered to should any incident occur, reducing the effect as far as practicable. This would be included in the final CEMP for the Proposed Development. • Any run-off at risk of contamination will be treated before discharge, and comprehensive spill response procedures will be in place to deal with incidents quickly and effectively. 		
	Operation and Maintenance (Drainage and	Swale – Operation and Maintenance Plan Recommended operation and maintenance measures are summarised. The final operation and maintenance plan for the	Developer	Operation and Maintenance Plan or OEMP



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
	Flood Risk Measures)	drainage strategy should be determined based on the final detailed design. <ul style="list-style-type: none"> • Removal of litter and debris – monthly or as required. • Manage vegetation / remove nuisance plants – monthly or as required. • Inspect outlet for blockages – monthly. • Inspect swale for compaction and silt accumulation, note any remedial works required – monthly or as required. • Cut grass to within desired range – monthly during growing season or as required. • Inspect vegetation coverage – monthly. • Reseed areas of poor vegetation growth, alter plant types to better suit conditions, if required - as required if bare soil is exposed of 10% or more of the swale treatment area. • Repair erosion or other damage by re-turfing or reseeding – as required. • Re-level uneven surfaces and reinstate design levels – as required. • Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits, and prevent compaction of the soil surface – as required. • Remove build-up of sediment on upstream gravel trench, flow spreader or at top of filter strip – as required. • Remove and dispose of oils or petrol residues using safe standard practices – as required. 		
Noise & Vibration	Construction	Noise Assessment has been scoped out of the EIA due to the absence of battery storage in the Proposed Development.	Developer / Contractor	CEMP



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
		<p>However, standard noise limits for general construction activities will be incorporated into the Construction Environmental Management Plan (CEMP), in line with BS5228 guidance. These include thresholds of 65 dB $L_{Aeq,T}$ during daytime hours and 45 dB $L_{Aeq,T}$ at night.</p> <p>The principal means of mitigation during the construction phase is adherence to the noise limits and good practice measures outlined in the CEMP.</p> <p>Best Practicable Means (BPM) will be applied to minimise construction noise at sensitive receptors. Although specific construction noise modelling was scoped out in agreement with PKC, overall impacts are assessed as low in magnitude.</p> <p>No additional mitigation is proposed beyond standard site practices and implementation of the CEMP.</p> <p>Vibration impacts during pre-construction and construction have also been scoped out, as no significant vibration sources (such as heavy piling or blasting) are expected.</p>		
Transport Statement	Construction (Traffic management)	<p>Construction Traffic Management Plan</p> <p>To manage construction-related traffic, a detailed Construction Traffic Management Plan (CTMP) will be prepared and implemented prior to the start of works.</p> <p>The CTMP will outline expected vehicle numbers and types, access routes to the Site, and delivery timings. It will include measures such as scheduling deliveries to avoid sensitive periods, enforcing a 5 mph speed limit on the site access road, and installing warning signage to protect potential pedestrians and cyclists in proximity to the Site.</p> <p>All vehicles and HGV will be instructed to use the proposed new access on C411 Roman Road and haulage route incorporating the</p>	Developer / Contractor	CTMP



EIA Report Chapter	Type of Mitigation or Compensation	Environmental Measure	Responsibility for Implementation	Compliance Mechanism
		<p>north and south-bound carriageways of the A9 onto the wider transport network – avoiding the village of Tibbermore and Methven to the east and north of the Site.</p> <p>As part of this mitigation, wheel washing facilities will be installed to reduce mud and debris on public roads, and construction traffic will be monitored to identify and address any emerging issues. The CTMP will also include arrangements for emergency access, signage, dust suppression, and liaison with PKC.</p> <p>These measures will ensure that the increase in traffic during construction — averaging 60 daily movements and peaking in month five with 92 daily movements — is safely managed and does not result in significant disruption to road users or the local community.</p>		
Glint and Glare Assessment	Operation	<p>With the inclusion of existing and proposed landscape screening (as per Landscape Management Plan), during the establishment of new hedgerows, the residual glint and glare effects of the Proposed Development are considered low.</p> <p>Hedgerow screening, including along the south A9 boundary will be commenced sufficiently in advance of construction and operation of the Project.</p> <p>This estimated time period of 5-6 years prior to construction, will allow for sufficient growth to establish prior to the installation of arrays. If at time of construction, hedgerow is deemed too low, then this will be supplemented by other means – potentially including screen barrier or screen netting.</p>	Developer	Planning Condition



9.3 Summary of Residual Effects

9.3.1 **Table 9-2** provides a reference to any significant residual environmental effects identified in the technical sections of this EIA, as well as a cross-reference to any relevant mitigation measures identified.

Table 9-2: Summary of Landscape and Visual Effects

Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
During Construction and Decommissioning					
Lowland Hills LCT	Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Broad Valley Lowlands LCT	Moderate / Minor	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Lowland River Corridors LCT	Minor	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Dupplin Castle GDL	Minor	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Methven Castle GDL	Minor	Adverse	Compliance with the requirements of an LPA-approved Construction	No change	No change



Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
			Environmental Management Plan (CEMP).		
Windyedge Cottages	Major/Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	Moderate Adverse	Adverse
Newbiggin Farm	Major/Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Windyedge Farm	Major/Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
1 Wester Cultmalundie Cottages	Major/Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Wester Cultmalundie Farm	Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
East Cultmalundie Farm Cottage	Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change



Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
The Bothy (East Cultmalundie	Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
4 & 6 Wester Cultmalundie Cottages	Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Gateside	Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
The Barn	Moderate.	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Cotton Cottages	Minor	Neutral	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
North Lodge	Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Cotton Farm	Moderate	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change



Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
Tibbermore	Moderate.	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Unclassified road between A9 and C410 (Between Crieff and Perth)	Major / Moderate effects from sections of the route up to distances of 400 m. Views from other sections would be Moderate/ Minor	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
A9	Major / Moderate effects from sections of the route up to distances of 700 m. Views from other sections would be Moderate/ Minor	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
Unclassified road between A9 and Findo Gask	Major / Moderate effects from sections of the route up to distances of 150 m. Views from other sections would be Minor.	Adverse	Compliance with the requirements of an LPA-approved Construction Environmental Management Plan (CEMP).	No change	No change
During Operation					
Lowland Hills LCT	Major/Moderate within 500 m. Moderate/ Moderate minor at greater distances	Adverse	By year 10, establishment of LMP measures including hedgerow planting would result in a gradual reduction in effects across the Lowland Hill LCT.	Major/Moderate within 500 m. Moderate/ minor at greater distances	Adverse



Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
Broad Valley Lowlands LCT	Moderate / Minor	Adverse	By year 10 views of the Proposed Development would soften further, due to the establishment of hedgerows.	Moderate / Minor	Adverse
Lowland River Corridors LCT	Minor	Adverse	By year 10 measures including hedgerow planting would further curtail any visibility Proposed Development would represent a distant element of built form, within wider farmland.	Minor	Neutral
Dupplin Castle GDL	Minor	Adverse	The ZTV coverage is extremely minimal and concentrated on the northern extents of the GDL within areas with mature woodland.	Minor	Neutral
Methven Castle GDL	Minor	Adverse	The ZTV coverage is extremely minimal and concentrated on the northern extents of the GDL within areas with mature woodland. By year 10 measures including hedgerow planting would further curtail any visibility	Minor	Neutral
Windyedge Cottages	Major/Moderate	Adverse	By year 10 hedgerow would filter views of the Proposed Development.	Moderate Effects would remain significant due to distance and proportion of view occupied	Adverse
Newbiggin Farm	Major/Moderate	Adverse	By year 10 hedgerow would filter views of the Proposed Development.	Moderate	Adverse



Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
				Effects would remain significant due to distance and proportion of view occupied.	
Windyedge Farm	Major/Moderate	Adverse	By year 10 hedgerow would filter views of the Proposed Development.	Moderate Effects would remain significant due to distance and proportion of view occupied.	Adverse
1 Wester Cultmalundie Cottages	Major/Moderate	Adverse	By year 10 hedgerow would filter views but Proposed Development would occupy a large proportion of the view.	Major/Moderate	Adverse
Wester Cultmalundie Farm	Moderate. Not significant due the screening effect of intervening buildings and landform	Adverse	By year 10 hedgerows would filter views of the Proposed Development.	Moderate. Not significant due the screening effect of intervening buildings and landform.	Adverse
East Cultmalundie Farm Cottage	Moderate. Not significant, due the screening effect of intervening landform and curtilage vegetation.	Adverse	By year 10 hedgerows would filter views of the Proposed Development.	Moderate. Not significant due the screening effect of intervening landform and curtilage vegetation.	Adverse
The Bothy (East Cultmalundie	Moderate. Not significant due the screening effect of	Adverse	By year 10 hedgerows would filter views of the Proposed Development.	Moderate. Not significant due the screening effect of	Adverse



Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
	intervening buildings and landform			intervening buildings and landform.	
4 & 6 Wester Cultmalundie Cottages	Moderate. Not significant due the screening effect of intervening buildings and landform.	Adverse	By year 10 hedgerows would filter views of the Proposed Development.	Moderate. Not significant due the screening effect of intervening buildings and landform.	Adverse
Gateside	Moderate. Not significant due the screening effect of intervening buildings and landform.	Adverse	By year 10 hedgerows would filter views of the Proposed Development.	Moderate. Not significant due the screening effect of intervening buildings and landform.	Adverse
The Barn	Moderate. Not significant, due the screening effect of intervening landform	Adverse	By year 10 hedgerows would filter views of the Proposed Development.	Moderate. Not significant due the screening effect of intervening landform	Adverse
Cotton Cottages	Minor	Neutral	Existing tree cover	Minor	Neutral
North Lodge	Moderate. Not significant, due the screening effect of intervening tree cover	Adverse	Existing tree cover	Moderate. Not significant due the screening effect of intervening tree cover.	Adverse
Cotton Farm	Moderate. Not significant, due the screening effect of intervening buildings.	Adverse	By year 10 hedgerows would filter views of the Proposed Development	Moderate. Not significant due the screening effect of intervening buildings.	Adverse



Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
Tibbermore	Moderate. Not significant, due to the screening effect of intervening landform	Adverse	The Proposed Development is predominantly screened by landform	Moderate. Not significant due to the screening effect of intervening landform	Adverse
Burghmuir (Perth)	Minor	Neutral	The Proposed Development would be barely discernible	Minor	Neutral
Lochty	Minor	Neutral	The Proposed Development would be barely discernible	Minor	Neutral
West Huntingtower Field	Minor	Neutral	The Proposed Development would be barely discernible	Minor	Neutral
Methven	Minor	Neutral	The Proposed Development would be barely discernible.	Minor	Neutral
Unclassified road between A9 and C410 (Between Crieff and Perth)	Major / Moderate effects from sections of the route up to distances of 400 m. Views from other sections would be Moderate/ Minor, due to intervening landform screening.	Adverse	By year 10 hedgerows would filter views of the Proposed Development	Moderate Effects would remain significant within 400 m due to distance and proportion of view occupied.	Adverse
A9	Major / Moderate effects from sections of the route up to distances of 700 m. Views from other sections would be Moderate/ Minor, due to intervening landform screening.	Adverse	By year 10 hedgerows and woodland edge would filter views of the Proposed Development	Moderate / Minor sections of the route up to distances of 700 m	Adverse



Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
Unclassified road between A9 and Findo Gask	Major / Moderate effects from sections of the route up to distances of 150 m. Views from other sections would be Minor, due to intervening landform and tree cover.	Adverse	By year 10 hedgerows and woodland edge would filter views of the Proposed Development	Moderate / Minor sections of the route up to distances of 150 m.	Adverse
Unclassified road between C410 and Balnagown	Moderate / Minor	Adverse	By year 10 views of the Proposed Development would soften further, due to the establishment of hedgerows.	Moderate / Minor	Adverse
C410 (Between Crieff and Perth)	Minor	Adverse	ZTV coverage is fragmented and views would be partially screened by intervening landform.	Minor	Neutral
Gloagburn Farm shop	Moderate / Minor	Adverse	By year 10 views of the Proposed Development would soften further, due to the establishment of hedgerows.	Moderate / Minor	Neutral
Footpath METH /131	Moderate / Minor	Adverse	Proposed Development would be predominantly screened by intervening landform and heavily filtered by tree cover.	Moderate / Minor	Neutral
Footpath METH / 126	Minor	Adverse	Proposed Development would be predominantly screened by intervening landform	Minor	Neutral
METH / 122	Minor	Adverse	Proposed Development would be predominantly screened by intervening landform	Minor	Neutral
Cumulative Effects					



Receptor	Significance of Potential Effect		Mitigation Measures	Significance of Residual Effect	
	Significance	Beneficial / Adverse		Significance	Beneficial / Adverse
METH/21	Minor	Adverse	Proposed Development would be predominantly screened by intervening landform	Minor	Neutral
METH / 8	Minor	Adverse	Proposed Development would be predominantly screened by intervening landform	Minor	Neutral
METH/15 & METH /16	Minor	Adverse	Proposed Development would be predominantly screened by intervening landform	Minor	Neutral

Table 9-3: Summary of Ecological and Ornithological Effects

IEF/OEF	Potential Effect	Significance of Effect (with embedded mitigation)	Additional Mitigation Measures Required	Residual Effect
Construction Phase				
Designated Sites (HRA Input)	Species displacement / disturbance Habitat loss	Not Significant	N/A	Negligible
Breeding Birds	Species displacement / disturbance	Not Significant	N/A	Negligible
Wintering Birds	Species displacement / disturbance Habitat loss	Not Significant	N/A	Negligible
Operation Phase				
Designated Sites	Species displacement / disturbance Habitat loss	Not Significant	N/A	Negligible



IEF/OEF	Potential Effect	Significance of Effect (with embedded mitigation)	Additional Mitigation Measures Required	Residual Effect
Breeding Birds	Species displacement / disturbance Habitat loss	Not Significant	N/A	Negligible
Wintering Birds	Species displacement / disturbance Habitat loss	Not Significant	N/A	Negligible
Cumulative Impacts				
Designated Sites	Species displacement / disturbance Habitat loss	Not Significant	N/A	Negligible
Wintering Birds	Species displacement / disturbance Habitat loss	Not Significant	N/A	Negligible

Table 9-4 Summary of Cultural Heritage and Archaeological Effects

Receptor	Significance of Effect		Mitigation Measures	Significance of Residual Effect	
	Significance Beneficial / Adverse			Significance Beneficial / Adverse	
During Construction & Decommissioning					
Battle of Tippermuir (BTL39)	Minor	Adverse	, Archaeological monitoring and recording, Site procedure toolbox talk/programme	Minor	Adverse
SLR15 - Cultmalundie Woods, quarry	Negligible	Adverse	N/A	Negligible	Adverse
SLR8 – Cultmalundie, linear feature	Negligible	Adverse	N/A	Negligible	Adverse



SLR61 – Roman Road	Negligible	Adverse	N/A	Negligible	Adverse
Unknown Remains - Roman	Moderate	Adverse	Geophysics if suitable conditions, followed by an appropriate means of mitigation once the full extent of remains are known.	Moderate	Adverse
Unknown Remains – Battle of Tippermuir	Minor	Adverse	Archaeological Monitoring and recording, Site procedure toolbox talk/programme, recording	Minor	Adverse
During Operation					
Battle of Tippermuir (BTL39)	Minor	Adverse	N/A	Minor	Adverse
Cumulative Effects					
Battle of Tippermuir (BTL39)	Minor	Adverse	N/A	Minor	Adverse

Table 9-5 Summary of Hydrological, Geological and Hydrogeological Effects

Receptor / Description of Effect	Mitigation Measures	Residual Effect (with mitigation)
Construction		
Generation of pollution impairing surface water and groundwater receptors, including River Earn DWPA.	<ul style="list-style-type: none"> Mitigation by design, including 10 m watercourse buffer and adherence to good practice measures. Final CEMP to be submitted for the written approval of PKC. 	Not significant.



Receptor / Description of Effect	Mitigation Measures	Residual Effect (with mitigation)
	<ul style="list-style-type: none"> Confirmatory water quality monitoring, the scope and frequency of which will be agreed with PKC prior to construction commencing. 	
Increased erosion and sedimentation impairing surface water and groundwater receptors including River Earn DWPA.	<ul style="list-style-type: none"> Mitigation by design, including 10 m watercourse buffer and adherence to good practice measures. Final CEMP to be submitted for the written approval of PKC. Confirmatory water quality monitoring, the scope and frequency of which will be agreed with PKC prior to construction commencing. 	Not significant.
Increased flood risk to downstream receptors during construction.	<ul style="list-style-type: none"> Mitigation by design, including avoiding deep (>0.3m deep) areas of surface water flooding and adherence to good practice measures. Commitment to deploy SuDS during construction which will form part of the final CEMP. Commitment to ensure all watercourse crossings are designed in accordance with good practice and construction detailed will be agreed with SEPA prior to construction. 	Not significant.
Potential impacts on surface water and groundwater levels and flow which may impact water contribution to River Earn DWPA.	<ul style="list-style-type: none"> Adherence to good practice measures. Final CEMP to be submitted for the written approval of PKC. Confirmatory water quality monitoring, the scope and frequency of which will be agreed with PKC prior to construction commencing. 	Not significant.
Operation		
Generation of pollution impairing surface water and groundwater receptors, including River Earn DWPA.	<ul style="list-style-type: none"> Adherence to good practice measures adopted through a longer-term operational management plan, including appropriate storage and handling of potential pollutants, if required, in accordance with EASR and an operational management plan which will be agreed with PKC prior to construction commencing. 	Not significant.
Increased erosion and sedimentation impairing surface water and groundwater receptors including River Earn DWPA.	<ul style="list-style-type: none"> Adherence to good practice measures adopted through a longer-term operational management plan. 	Not significant.



Receptor / Description of Effect	Mitigation Measures	Residual Effect (with mitigation)
Increased flood risk to downstream receptors during construction.	<ul style="list-style-type: none"> Adherence to good practice measures adopted through a longer-term operational management plan, including development of the concept drainage design (see Technical Appendix: FRA and DIA), which will be agreed with PKC prior to construction. Commitment to complete regular inspection of SuDS and watercourse crossings to ensure systems remain as designed. 	Not significant.
Potential impacts on surface water and groundwater levels and flow which may impact water contribution to River Earn DWPA.	<ul style="list-style-type: none"> Adherence to good practice measures adopted through a longer-term operational management plan. 	Not significant.
Decommissioning		
Similar to potential construction effects.	Methods for decommissioning and mitigation measures to be employed at decommissioning stage will follow good practice measures and guidance at that time, set out within a decommissioning plan.	Not significant.
Cumulative		
No cumulative effects are anticipated as a result of the Proposed Development.		

The results of other relevant technical assessments which were not formally assessed for significance as part of the EIA, are contained within **Volume 4 - Technical Appendices** of the **EIA Report**:

- Technical Appendix: Land Capability for Agriculture (LCA);
- Technical Appendix: Transport Statement (TS); and
- Technical Appendix: Glint and Glare (G&G).



