15. Summary of Mitigation and Residual Effects

15.1 The EIA and the design evolution have been an iterative process therefore many measures to mitigate potential adverse environmental effects have been incorporated into the design of the proposed development in order to avoid, reduce or offset negative changes. These measures are 'embedded mitigation' and have been accounted for in each of the technical assessments, where relevant (see Chapters 6-14).

15.2 The residual effects of the proposed development have been assessed as part of the EIA and can be described as the effects which remain after the implementation of the embedded and any additional proposed mitigation measures. The residual effects have been identified for each category in the preceding technical chapters (Chapters 6-14) and are summarised in **Table 15.1**. It is expected that the appropriate mitigation measures will be secured through appropriately worded planning conditions. Reference should be made to each technical chapter for the definition of the significance of the effect stated.

15.3 Following the table is a discussion of the residual effects and a conclusion.

Table 15.1: Summary of Mitigation and Residual Effects

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
Landscape and Visual	**Construction**				
	Loss of landscape features, alterations to topography and presence of construction activity and materials	Design of scheme to ensure the retention of as much existing vegetation as possible. Limited re-profiling of topography, with platforms designed to retain existing levels as far as possible.	Moderate/Minor Adverse Significance (Medium, short term and localised) which is not significant	None	Moderate/Minor Adverse, which is **not significant**
	Views of construction activity, machinery and materials	Retention of existing vegetation where possible will serve to screen views of construction activity.	Moderate/Minor Adverse Significance (Medium, short term and localised) which is not significant	Use of hoarding will further emphasise screening effect at lower levels.	Moderate/Minor Adverse, which is **not significant**
	Operation				
	Views of residential buildings within an arable landscape	Views of built form within the Site will be limited as a result of the retention and further enhancement of boundary planting, supplemented by native tree planting which will mature over time. Where views of the built form are possible, they will be seen within a wider context of an urban landscape in which existing residential uses are present	Overall Moderate / Minor Significance which is not significant	None	Moderate/Minor Adverse, which is **not significant**
	Introduction of residential buildings into the landscape and impacts on openness	The introduction of residential buildings into the landscape will inevitably change the character of the Site, however it should be noted that in terms of openness in this location, proposed built form on-Site will be located fully within the KSS2 allocation boundary, and outwith the Green Wedge Policy area (SP6). The SUDs proposed along the eastern boundary of the Site will incorporate a naturalised aesthetic, with landscape enhancements through new	Overall Moderate / Minor Significance which is not significant	None	Moderate/Minor Adverse, which is **not significant**

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
		planting, ensuring no harm to openness, nor any perception of encroachment and coalescence beyond the KSS2 allocation boundary. Where views of the built form are possible, they will be seen within a wider context of an urban residential landscape in which existing residential uses are present.			
Ecology	**Construction**				
	Midland Meres and Mosses Phase 2B Ramsar (international importance)	None	The Proposed Development is located approximately 2.5 km from the Ramsar, which will avoid the risk of direct habitat loss during construction of both phases. There are no hydrological connections from the Site to the Ramsar. Therefore water pollution risk during construction is negligible for both phases. Due to the distance from the Site to the Ramsar, the Ramsar has been scoped out of assessment for air quality pollution impacts during construction, as detailed in the Air Quality report by Miller Goodall (Ref 102716-2) during both phases. (Negligible)	None required	Negligible
	River Dee and Bala Lake SAC (international importance)	None	Development is located approximately 5.8 km from the SAC, which will avoid the risk of direct habitat loss during construction of both phases. There are no hydrological connections from the Site to the SAC. Therefore water pollution risk during construction is negligible for both phases. This is evidenced in the Hydrology report by Adept, Ref: ERLP-ACE-XX-XX-RP-C-0001. Due to the distance from the Site to the SAC, the SAC has been scoped out of assessment for air quality	None required	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
			pollution impacts during construction, as detailed in the Air Quality report by Miller Goodall (Ref 102716-2), during both phases. (Negligible)		
	Berwyn and South Clwyd Mountains SAC / Berwyn SPA (international importance)	None	Development is located approximately 8.1 km from the SAC/SPA, which will avoid the risk of direct habitat loss during construction of both phases. There are no hydrological connections from the Site to the SAC/SPA. Therefore water pollution risk during construction is negligible for both phases. Due to the distance from the Site to the SAC/SPA, the SAC/SPA has been scoped out of assessment for air quality pollution impacts during construction, as detailed in the Air Quality report by Miller Goodall (Ref 102716-2), during both phases. (Negligible)	None required	Negligible
	Cefn Park LWS (county importance)	None	As the LWS is located approximately 830 m south of the development Site, without further mitigation the features for which the LWS is designated, i.e. broadleaved woodland, may be impacted during the construction of Phase 1 and Phase 2 of the development e.g. through the generation of dust or plant movements. These impacts will cease when the construction phase is completed. (Temporary, minor, adverse for both phases)	A CEMP should be produced for both Phase 1 and Phase 2 of the Proposed Development, to include standard pollution control measures to protect Cefn Park LWS during construction.	Negligible
	Borras Bog LWS (county importance)	None	As the LWS is located approximately 1 km north of the Development Site, without further mitigation the features for which the LWS is designated, i.e. acid bog, may be impacted during the construction of Phase 1 and Phase 2 of the development e.g. through the generation of dust or plant movements. These impacts will cease when the construction phase is	A CEMP should be produced for both Phase 1 and Phase 2 of the Proposed Development, to include standard pollution control measures to protect Borras Bog LWS during construction.	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
			completed. (Temporary, minor, adverse for both phases)		
	Hedgerows (local importance and Priority Habitat)	Current development proposals include the retention of the vast majority of the hedgerows through and surrounding the Site. Please see AIA at **Appendix 7.14**.	The majority of boundary hedgerows will be retained during Phase 1 and Phase 2, however some may be lost to development. Final magnitude of hedgerow loss will be confirmed at the reserve matters application for each phase. Retained hedgerows may be degraded without appropriate protection methods during construction. (Permanent, minor, adverse for both phases)	A CEMP should be produced for both Phase 1 and Phase 2 of the Proposed Development, to include standard pollution control measures to protect retained habitats during construction. The AIA at **Appendix 7.14** details how retained hedgerows will be protected during construction. Any lost lengths of hedgerow should be replaced within the Site, using native species in ecologically strategic locations.	Negligible
	Pond (local importance and Priority Habitat)	Current development proposals include the retention of the on-site pond.	Pollution risk during construction of Phase 1 and Phase 2 (Temporary, minor, adverse for both phases)	A CEMP should be produced for both Phase 1 and Phase 2 of the Proposed Development, to include standard pollution control measures to protect retained habitats during construction. An additional three ponds (SUDs) are proposed within the illustrative masterplan to provide additional aquatic habitat on Site.	Negligible
	Scattered trees (local importance)	Current development proposals include the retention of the vast majority of the scattered trees through and surrounding the Site. Please see AIA at **Appendix 7.14**.	The vast majority of boundary trees will be retained during Phase 1 and Phase 2, however some may be lost to development. Final magnitude of tree loss will be confirmed at the reserve matters application for each phase. Retained trees may be degraded without appropriate protection methods during construction. (Permanent, minor, adverse for both phases)	A CEMP should be produced for both Phase 1 and Phase 2 of the Proposed Development, to include standard pollution control measures to protect retained habitats during construction. The AIA at **Appendix 7.14** details how retained trees will be protected during construction. Any lost scattered trees should be	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
				replaced within the Site, using native species in ecologically strategic locations.	
	Semi-natural broadleaved woodland (local importance)	Current development proposals include the complete retention of the on-site woodland copse. Please see AIA at **Appendix 7.14**.	Woodland will be retained, however may be degraded through construction/storage in the RPZ or through pollution of the habitat during construction of both phases. (Temporary, minor, adverse for both phases)	A CEMP should be produced for both Phase 1 and Phase 2 of the Proposed Development, to include standard pollution control measures to protect retained habitats during construction. The AIA at **Appendix 7.14** details how retained trees will be protected during construction. Any loss of scattered trees or hedgerows should be replaced within the Site, using native species in ecologically strategic locations.	Negligible
	Invasive Plant species (Japanese knotweed)	None	Risk of causing spread during Phase 1 and Phase 2 (Temporary adverse minor during both phases)	A pre-commencement survey for both Phase 1 and Phase 2 for invasive plant species should be undertaken, with recommendations for the removal of the invasive species from Site prior to the start of works by a specialist contractor where required.	Negligible
	Amphibians (Local importance)	Current development proposals include the retention of the pond used by breeding GCN, as well as the surrounding woodland copse, maintaining breeding habitat within the Site. In addition, the vast majority of the hedgerows will be retained to allow the species to commute through the Site. The sports pitches surrounding the on-site pond and badger Sett 2 on the northern-eastern Site boundary will be retained, allowing continued access to the wider GCN population within the three ponds (Pond 3, Pond 4 and Pond 5) lying to the north	Loss of small areas of optimal amphibian habitat (hedgerows and field margin vegetation) within 250 m of GCN breeding pond in Phase 1 and Phase 2. Loss of large areas of arable land within 250 m of a GCN breeding pond comprising sub-optimal GCN habitat which is not significant for maintaining populations however, GCN may commute across the habitat and its loss may lead to habitat fragmentation. Risk of disturbance / killing / injury GCN and common amphibians during construction in Phase 1 and Phase 2.	The CEMP should include Precautionary Working Methods to protect common amphibians during the construction phase, including a check for the species group by a SQE during clearance of suitable habitat. A great crested newt licence will be required from Natural Resources Wales to mitigate the loss of GCN terrestrial habitat within 250 m of breeding ponds and reduce the risk of killing/injuring individuals. The Receptor site for Phase 1 would be the	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
		of the Site.	(Permanent, direct, minor, adverse for both phases)	woodland surrounding Pond 6. For phase 2, this could be the southern and eastern SUDS area within Phase 1. The proposed southern and eastern SUDS features in Phase 1, could also be improved for GCN through appropriate design, with ecologically sensitive planting included in associated with the SUDs which, if designed and managed correctly including opportunities for hibernation/refuge, could introduce more suitable terrestrial habitat than is currently present. To ensure GCN are not dissuaded from commuting around the Site, and to further breeding ponds to the north-east, a green corridor and a Lighting Plan should be produced detailing the creation of dark corridors through the Site.	
	Badger (Negligible importance)	Current development proposals include the retention of four of the five badger setts on-site, including both main setts. One outlier sett will require closure to facilitate the development. The proposed retention of the vast majority of the hedgerows and complete retention of the woodland will provide commuting and foraging resources for badger post-development.	Of the five badger setts on-site, only one single entrance outlier (Sett 3) will require closure to facilitate the development of Phase 2. No setts require closure to facilitate Phase 1. There will be permanent loss of foraging habitat in both Phase 1 and 2, through the loss of arable fields. However, this habitat is common in the surrounding area and will not be important in maintaining populations. (Negligible)	The CEMP should include Precautionary Working Methods to protect badger during the construction phase, including a check for the species by a SQE during clearance of suitable habitat. A pre-commencement survey for badger should also be undertaken for Phase 1 and Phase 2 to ensure no new setts have been constructed. No setts will require closure to facilitate Phase 1. One single entrance outlier sett (Sett 3) will require closure in Phase 2, for which a Natural	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
				Resources Wales Badger Licence will be required. To ensure badger are not dissuaded from commuting around the Site, or cut off from foraging habitat within/surrounding the Site, a Lighting Plan should be produced detailing the creation of dark corridors through the Site.	
	Bats (local importance)	The retention of the mature scattered trees will provide continued roosting opportunities for bats through development. The retention of the trees, as well as the hedgerows, woodland and pond will also preserve the highest value habitats for foraging and commuting bats on-site.	The majority of trees with bat roosting potential in Phase 1 will be retained and protected through development. However, should any of these trees be removed without further mitigation, there would be a risk of disturbance / killing / injury during construction. This is also the case for all trees within Phase 2. Currently, the removal of hedgerows across the Site in Phase 1 and Phase 2 is limited, maintaining good connectivity to commuting and foraging areas within the Site and the wider landscape. However, some areas of hedgerow will be lost in both phases, as well as larger areas of arable land, potentially causing habitat fragmentation. The Site is located within the CSZ of the lesser horseshoe maternity roost located within Erlas Victorian Walled Garden estate approximately 260 m north of the Site. As the Site largely provides habitat of low foraging value i.e. arable land, it is assumed the species generally commute east to forage . Furthermore, the Proposed Development details the general retention of the higher value foraging habitats (woodland, pond, hedgerows), with the loss of the arable land. In addition, the roost will not be directly impacted by the works. With only sub-optimal foraging habitat within the CSZ to be lost in Phase 1 and Phase 2.	The AIA at Appendix 7.14 details that only one tree with bat roosting potential in Phase 1 will require removal, Tree 28, which has Low bat roosting potential. Tree 28 must therefore be section-felled in the presence of a SQE. Should plans for Phase 1 change, and High or Moderate bat roosting potential trees require removal, the trees to be removed must be subject to Aerial Inspections or Nocturnal Surveys. With regards to Phase 2, a PRA (and potential further surveys) will be required for all trees to be lost in Phase 2. The detailed results and mitigation measures resulting from the further surveys and PRA should be detailed as part of the reserved matters application for each phase on the Site. A series of bat boxes should be installed in each phase to mitigate the loss of any potential roost features. The majority of hedgerows will be retained on-site, however the small areas of hedgerow loss should be replaced within the Site, using native species in ecologically strategic locations to improve bat commuting	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
			(Permanent direct, minor adverse for both phases)	habitat. The eastern boundary of the site should have hedgerow planting to enhance the existing hedges, creating a double hedge. To ensure bats are not dissuaded from commuting around the Site, or cut off from foraging habitat within/surrounding the Site, a Lighting Plan should be produced detailing the creation of dark corridors through the Site. The CEMP should also detail that these areas should be kept as dark areas during construction and include sensitive construction lighting. The Site is located within the CSZ of the lesser horseshoe maternity roost located within Erlas Victorian Walled Garden estate approximately 260 m north of the Site. As the Site largely provides habitat of low foraging value i.e. arable land, it is assumed the species generally commute east to forage. The Proposed Development details the general retention of the higher value foraging habitats (woodland, pond, hedgerows), with the loss of the arable land, and as such only sub-optimal foraging habitat within the CSZ is to be lost in both Phase 1 and Phase 2. To mitigation this loss of sub-optimal foraging habitat, the southern and eastern SUDS area in Phase 1 with be planted sensitively for ecology, and maintained as a dark area, to provide higher value foraging habitat within the CSZ then is currently present. This is deemed sufficient mitigation for both phases.	

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
	Breeding birds (local importance)	The general retention of the woodland, scattered trees and hedgerows will preserve nesting habitat for passerine species within the Site. The amenity grassland pitches important locally for foraging starling and thrushes will also be retained.	Loss of small areas of boundary vegetation comprising hedgerow, scrubby margins and scattered trees suitable for nesting passerine species in both Phase 1 and Phase 2. Loss of arable land supporting three pairs of red listed breeding lapwing in Phase 1 and Phase 2. Risk of disturbance / killing / injury during construction. (Permanent, direct, minor, adverse for both phases)	Clearance of suitable habitat (trees hedgerows, arable fields) should be timed outside the nesting bird season (generally taken as March to August inclusive). If any clearance works to nesting habitats are required during the nesting season, then pre-removal checks for nesting birds must be carried out by a SQE, no more than 48 hours prior to the works commencing. The majority of scattered trees and hedgerows will be retained on-site, however the small areas of loss should be replaced within the Site, using native species in ecologically strategic locations to improve bird nesting habitat. A series of bat boxes should also be included within each Phase to provide further nesting opportunities. The Proposed Development of both phases would result in the loss of habitat which supports up to three pairs of breeding lapwing, loss of suitable arable habitat used by the 3 lapwing territories is unlikely to be significant in maintaining populations locally, as there will be regular changes in farmland use locally. This means the species is unlikely to show specific fidelity to arable habitat within the Site for breeding. In addition, the wider landscape contains large areas of similarly suitable habitat for this species to move into. However, mitigation will also be provided on-site	Minor Adverse

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
				in the southern and eastern SUDS area of Phase 1, which will be planted and managed to consider nesting lapwing, and in turn also benefit a wide range of other bird species should the SUDS features also be ecologically designed. This area is deemed sufficient mitigation or both phases.	
	Hedgehog (local importance)	The general retention of the woodland and hedgerows will provide foraging and commuting habitat for hedgehog post development.	Removal of small areas of hedgerow and dense ground cover during Phase 1 and Phase 2 could lead to accidental killing / injury, and result in loss/fragmentation of foraging / commuting habitat. (Permanent, direct, minor adverse for both phases)	The CEMP should include Precautionary Working Methods to protect hedgehog during the construction phase, including a check for the species by a SQE during clearance of suitable habitat. To ensure hedgehog are not dissuaded from commuting around the Site, or cut off from foraging habitat within/surrounding the Site, a Lighting Plan should be produced detailing the creation of dark corridors through the Site. “Hedgehog Highways” should also be installed within the Proposed Development to ensure the species can commute through residential gardens. A series of hedgehog houses could also be included.	Negligible
	Brown hare (Negligible importance but considered during construction)	None	Loss of suitable habitat for brown hare in Phase 1 and Phase 2, by way of the arable field margins. However, no brown hare ever seen on-site. Therefore habitats not important for maintaining populations locally.	The CEMP should include Precautionary Working Methods to protect brown hare during the construction phase, including a check for the species by a SQE during clearance of suitable habitat.	Neutral

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
			(Negligible)		
	Operation				
	Midland Meres and Mosses Phase 2B Ramsar (international importance)	None	Due to the distance from the Site to the Ramsar, the Ramsar has been scoped out of assessment for air quality pollution impacts during operation, as detailed in the Air Quality report by Miller Goodall (Ref 102716-2), during both phases. The Site lies over 18 km from the nearest publicly accessible part of the Ramsar at Fenns and Wixhall Moss. At this distance it is unlikely that the Proposed Development would generate a significant increase in visitor numbers that could affect the habitats / wildlife for which the Ramsar is designated. (Negligible)	None required	Negligible
	River Dee and Bala Lake SAC (international importance)	None	Due to the distance from the Site to the SAC, the SAC has been scoped out of assessment for air quality pollution impacts during operation, as detailed in the Air Quality report by Miller Goodall (Ref 102716-2), during both phases of the development. Due to the distance between the Site to the SAC, water pollution risk during operation is negligible for both phases. This is evidenced in the Hydrology report by Adept, Ref: ERLP-ACE-XX-XX-RP-C-0001. Whilst the nearest publicly accessible section of the river is unknown, the SAC is at a sufficient distance from the Proposed Development (some 5.8 km) to be unaffected by any increases in recreational pressure from Phase 1 or Phase 2 of the Proposed Development. (Negligible)	None required	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
	Berwyn and South Clwyd Mountains SAC / Berwyn SPA (international importance)	None	Due to the distance from the Site to the SAC/SPA, the SAC/SPA has been scoped out of assessment for air quality pollution impacts during operation, as detailed in the Air Quality report by Miller Goodall (Ref 102716-2), during both phases of the Proposed Development. The SAC/SPA will contain publicly accessible areas. However, the SPA/SAC is a sufficient distance from, the Proposed Development (8.1 km) to be unaffected by any increases in recreational pressure from Phase 1 or Phase 2 of the Proposed Development. (Negligible)	None required	Negligible
	Cefn Park LWS (county importance)	None	The LWS is located approximately 830 m south of the development Site, however additional recreational pressure as a result of both Phase 1 and Phase 2 of the Proposed Development on the LWS is not anticipated due to a lack of public access to the LWS. A Public Right of Way (PRoW) the extends round the boundary of Big Wood, but no paths lead through the designated site. (Negligible)	None required	Negligible
	Borras Bog LWS (county importance)	None	The operation of the Site could theoretically increase air pollutant emissions (deposition of NOx for airborne sources) resulting in possible adverse impacts on habitats for which the LWS is designated i.e. acid bog, during the operation of Phase 1 and Phase 2 of the Proposed Development. However, the location of the LWS immediately adjacent to the A5156, means the LWS is already likely to experience some significant effects on habitats as a result of NOx deposition, which is likely to mean the potential impacts from increases in NOx	None proposed	In the absence of modelling the effect is assumed to be Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
			deposition from the Proposed Development are likely to be negligible. However, as specific modelling of this has not been completed to date, this cannot be confirmed. In the absence of modelling the effect is assumed to be (Negligible)		
	Hedgerows (local importance and Priority Habitat)	None	Potential degradation of the retained hedgerows due to lack of management during the operation of Phase 1 and Phase 2. If management was amended, hedgerow condition could improve. (Temporary, minor, adverse for both phases)	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats, including suitable management of the hedgerows, pond, scattered trees and woodland. A LEMP should be provided for each development phase. The LEMP will also outline best practice in relation to the planting and establishment of new hedgerows to be planted on Site.	Negligible
	Pond (local importance and Priority Habitat)	None	Potential degradation of the retained pond due to lack of management during operation of Phase 1 and Phase 2. If management was amended, pond condition could improve. (Temporary, minor, adverse for both phases)	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats, including suitable management of the hedgerows, pond, scattered trees and woodland. A LEMP should be provided for each development phase. Three SUDs are proposed to be created on Site which provides additional aquatic habitat.	Negligible
	Scattered trees (local importance)	None	Potential degradation of the retained scattered trees due to lack of management during the operation of Phase 1 and Phase 2. If management was amended, tree condition could improve.	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats,	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
			(Temporary, minor, adverse for both phases)	including suitable management of the hedgerows, pond, scattered trees and woodland. A LEMP should be provided for each development phase.	
	Semi-natural broadleaved woodland (local importance)	None	Potential degradation of the woodland due to lack of management during the operation of Phase 1 and Phase 2. If management was amended, woodland condition could improve. (Temporary, minor, adverse for both phases)	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats, including suitable management of the hedgerows, pond, scattered trees and woodland. A LEMP should be provided for each development phase.	Negligible
	Invasive Plant species (Japanese knotweed)	None	Risk of causing spread during operation Phase 1 and Phase 2 to retained/created habitats. (Temporary adverse minor during both phases)	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats, including suitable management of the hedgerows, pond, scattered trees and woodland, as well as a strategy to manage the spread of invasive species. A LEMP should be provided for each development phase.	Negligible
	Amphibians (Local importance)	None	Risk of population decline through disturbance / killing / injury/ habitat fragmentation if retained habitats of use to GCN i.e. pond, hedgerows, woodland are not appropriately managed, including inappropriate lighting, during Phase 1 and Phase 2 of the Proposed Development. (Reversable, direct, minor, adverse for both phases)	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats, including suitable management of the hedgerows, pond, scattered trees and woodland. The management of these habitats will also consider methods for protecting species that may utilise the habitats such as GCN. It should also include management of species specific enhancements such as the creation of SUDS area in Phase 1. A LEMP should be provided for each	Minor beneficial

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
				development phase.	
	Badger (Negligible importance)	The indicative road layout as shown in the Parameter Plan at **Appendix 7.16,** details how the larger road within the development will be located away from the retained badger setts. This will aid in the reduction of potential disturbance to the species and likelihood of road collisions.	Potential disturbance /interference with the retained setts by residents. Risk of disturbance / killing / injury/ habitat fragmentation if retained habitats of use to badger i.e. hedgerows and woodland are not appropriately managed, including inappropriate lighting, during Phase 1 and Phase 2 of the Proposed Development. (Negligible)	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats, including suitable management of the hedgerows, pond, scattered trees and woodland. The management of these habitats will also consider methods for protecting species that may utilise the habitats such as badger. It should also include management of species enhancements such as habitat creation and green corridors including the proposed southern and eastern SUDs area. A LEMP should be provided for each development phase.	Negligible
	Bats (local importance)	None	Risk of population decline through disturbance / killing / injury/ habitat fragmentation if retained habitats of use to roosting, foraging and commuting bats i.e. pond, hedgerows, woodland (within CSZ of the lesser horseshoe maternity roost located within Erlas Victorian Walled Garden estate approximately 260 m north of the Site) are not appropriately managed, including inappropriate lighting, during Phase 1 and Phase 2 of the Proposed Development. (Reversable direct, minor adverse for both phases)	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats, including suitable management of the hedgerows, pond, scattered trees and woodland. The management of these habitats will also consider methods for protecting species that may utilise the habitats such as bats. It should also include management of species enhancements such as and the provision of bat boxes and the habitat enhancements provided in the southern and eastern SUDS area in Phase 1 and within the 20 sewer easement running north to south through the Site. A LEMP should be provided for each development phase.	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
	Breeding birds (local importance)	None	Risk of population decline through disturbance / killing / injury if retained habitats of use to breeding birds i.e. scattered trees, hedgerows and woodland are not appropriately managed, including inappropriate lighting, during Phase 1 and Phase 2 of the Proposed Development. (Reversible, direct, minor, adverse for both phases)	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats, including suitable management of the hedgerows, pond, scattered trees and woodland. The management of these habitats will also consider methods for protecting species that may utilise the habitats such as breeding birds. It should also include management of species enhancements such as bird boxes and the habitat enhancements provided in the southern and eastern SUDS area in Phase 1 and within the green corridor running north to south through the Site. A LEMP should be provided for each development phase. Loss of habitat for arable bird species (lapwing) not compensated	Minor Adverse
	Hedgehog (local importance)	None	Risk of population decline through disturbance / killing / injury/ habitat fragmentation if retained habitats of use to hedgehog i.e. pond, hedgerows and woodland are not appropriately managed, including inappropriate lighting, during Phase 1 and Phase 2 of the Proposed Development. (Reversable, direct, minor adverse for both phases)	A suitable LEMP or Ecological Enhancement Plan should be created to ensure the long-term management of the retained and proposed habitats, including suitable management of the hedgerows, pond, scattered trees and woodland. The management of these habitats will also consider methods for protecting species that may utilise the habitats such as hedgehog. It should also include management of species enhancements such as hedgehog houses and the habitat enhancements. In addition hedgehog corridors between gardens should be implemented to allow the species to	Negligible

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
				commute freely around the Site. A LEMP should be provided for each development phase.	
	Brown hare (Negligible importance but considered during construction)	None	No effect (Neutral)	None required	Negligible
Cultural Heritage	**Heritage: Construction**				
	Cefn Park Lodge (17273)	None	Moderate/Minor	CEMP	Minor
	Gates and gate-piers at Cefn Park Lodge (17274)	None	Moderate/Minor	CEMP	Minor
	Cefn Park (including attached stableyard range to N) (1551)	None	Neutral	CEMP	Neutral
	Pavilion including attached Skittle Alley at Cefn Park (17272)	None	Neutral	CEMP	Neutral
	The Lodge (1752)	None	Neutral	CEMP	Neutral
	Cherry Hill (1747)	None	Neutral	CEMP	Neutral
	93 and 95 Dean Road (16471 & 1751)	None	Neutral	CEMP	Neutral
	Ice-house to NW of Llwyn Onn Hall Hotel (17275)	None	Neutral	CEMP	Neutral
	Heritage: Completed and Operational Development				

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
	Cefn Park Lodge (17273)	None	Moderate/Minor	Retention of landscape features including historic hedgerows; incorporation of building materials seen in the surrounding historic environment; screening; and height limitations on development	Minor
	Gates and gate-piers at Cefn Park Lodge (17274)	None	Moderate/Minor	Retention of landscape features including historic hedgerows; incorporation of building materials seen in the surrounding historic environment; screening; and height limitations on development	Minor
	Cefn Park (including attached stableyard range to N) (1551)	None	Neutral	None required	Neutral
	Pavilion including attached Skittle Alley at Cefn Park (17272)	None	Neutral	None required	Neutral
	The Lodge (1752)	None	Neutral	None required	Neutral
	Cherry Hill (1747)	None	Neutral	None required	Neutral
	93 and 95 Dean Road (16471 & 1751)	None	Neutral	None required	Neutral
	Ice-house to NW of Llwyn Onn Hall Hotel (17275)	None	Neutral	None required	Neutral
	Archaeology: Construction				
	Home Farm Pond (55355)	None	Minor	Physical demarcation from construction works.	Minor/ Neutral
	Cefn Park Boundary stone	None	Moderate/ Minor	Watching Brief	Minor

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
	(104513).				
	Findspot, Abenbury Buckle (97016)	None	Moderate/ Minor	Metal Detecting across spoil heaps during trial-trenched evaluation.	Minor
	Findspot, Abenbury Buckle (97017)	None	Moderate/ Minor	Metal Detecting across spoil heaps during trial-trenched evaluation.	Minor
	Findspot, Abenbury Buckle (54701)	None	Moderate/ Minor	Metal Detecting across spoil heaps during trial-trenched evaluation.	Minor
	Findspot, Llywn Knottia Roman Coin (106386)	None	Moderate/ Minor	Metal Detecting across spoil heaps during trial-trenched evaluation.	Minor
	Findspot, Abenbury Coin (54713)	None	Moderate/ Minor	Metal Detecting across spoil heaps during trial-trenched evaluation.	Minor
	Findspot, Abenbury Spindlewhorl (97014)	None	Moderate/ Minor	None	Moderate/ Minor
	Findspot, Abenbury Spindlewhorl (97015)	None	Moderate/ Minor	None	Moderate/ Minor
	Unidentified Archaeology	None	Moderate	Archaeological Evaluation	Moderate/ Minor
	Archaeology: Completed and Operational Development				
	No identified effects.				
Traffic and Transport	**Construction**				
	Driver Delay	None	Minor Adverse	CEMP	Minor Adverse
	Pedestrian / Cycle Delay	None	Minor Adverse	CEMP	Minor Adverse
	Pedestrian / Cycle Amenity	None	Minor Adverse	CEMP	Minor Adverse

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
	Severance	None	Minor Adverse	CEMP	Minor Adverse
	Accidents and Safety	None	Minor Adverse	CEMP	Minor Adverse
	Operation				
	Driver Delay	Provision for new link connection through the Site to connect to KSS2 North in the future.	Minor Adverse	Contribution to off-site junction capacity improvements.	Minor Adverse
	Pedestrian / Cycle Delay	New pedestrian and cycle infrastructure within the Site.	Minor Adverse	Delivery of new off-site pedestrian and cycle infrastructure.	Negligible
	Pedestrian / Cycle Amenity	New pedestrian and cycle infrastructure within the Site.	Minor Adverse	Delivery of new off-site pedestrian and cycle infrastructure.	Negligible
	Severance	New pedestrian and cycle infrastructure within the Site.	Minor Adverse	Delivery of new off-site pedestrian and cycle infrastructure.	Negligible
	Accidents and Safety	New pedestrian and cycle infrastructure within the Site.	Minor Adverse	Delivery of new off-site pedestrian and cycle infrastructure.	Negligible
Air Quality	**Construction**				
	No identified effects				
	Operation				
	I***ncrease in levels of*** NO_2, PM_{10} and $PM_{2.5}$	EV Charging points, Heating and Boilers to be installed in line with IAQM guidance	Negligible	**N*one***	Negligible
Noise and Vibration	**Construction**				
	Construction road traffic noise	None	Disturbance due to increase in road traffic noise. **Not Significant**.	N/A	Disturbance due to increase in road traffic noise. **Not Significant**.

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
	Construction activity noise	None	Temporary disturbance at residential NSRS adjacent to the Site due to noise associated with on-site construction activities. **Significant.**	Noise barrier. Application of BPM and limiting duration of exposure. Contractor to conduct updated noise and vibration assessment and create noise and vibration management plan as part of the CEMP.	Temporary disturbance at residential NSRs adjacent to the Site due to noise associated with on-site construction activities. Moderate Adverse, which is **Significant.**
	Operation				
	Road traffic noise – 2026 Opening Year, representative of opening of Phase 1	Active travel	Disturbance due to increase in road traffic noise. **Not Significant.**	N/A	Disturbance due to increase in road traffic noise. **Not Significant.**
	Road traffic noise – 2035 Assessment Year, representative of opening of Phase 2	Active travel	Disturbance due to increase in road traffic noise. **Not Significant.**	N/A	Disturbance due to increase in road traffic noise. **Not Significant.**
Drainage and Flood Risk	**Construction**				
	Contaminants from accidental fuel spillages	None	Minor Adverse	Spill Kit and Plan to be in place during construction.	Negligible, which is **not significant**
	Sediment Loading and Flow Impacts	None	Minor Adverse	Silt busters or other appropriate silt traps to be implemented as part of the temporary drainage design for construction.	Negligible, which is **not significant**
	Discharge of poor-quality water to water bodies	None	Minor Adverse	A CEMP for control and management of potential risks at the site would be developed and implemented by the Principal Contractor for the preparatory and construction phases of the site.	Negligible, which is **not significant**

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
	Damage to SSSI	The proximity of the development to the nearest SSSI, 2.8km is such that mitigation is not deemed to be required.	Negligible	None Required	Negligible, which is **not significant**
	Pollution of groundwater	None	Moderate Adverse	A CEMP for control and management of potential risks at the site would be developed and implemented by the Principal Contractor for the preparatory and construction phases of the site.	Negligible, which is **not significant**
	Erosion of watercourse and river banks	Drainage has been designed to avoid existing waterbodies wherever possible.	Negligible	None Required	Negligible, which is **not significant**
	Operation				
	Contaminants from accidental fuel spillages	Incorporation of SuDS within the drainage design offers multiple levels of treatment. The volume of the proposed attenuation basins allows for dilution.	Minor Adverse	None Required	Negligible, which is **not significant**
	Sediment Loading and Flow Impacts	The drainage design incorporates several silt capture methods to reduce sediment runoff from the development.	Minor Adverse	None Required	Negligible, which is **not significant**
	Discharge of poor-quality water to water bodies	Incorporation of SuDS within the drainage design offers multiple levels of treatment. The volume of the proposed attenuation basins allows for dilution.	Minor Adverse	None Required	Negligible, which is **not significant**
	Damage to SSSI	The proximity of the development to the nearest SSSI, 2.8km is such that mitigation is not deemed to be required.	Negligible	None Required	Negligible, which is **not significant**
	Pollution of groundwater	The development is not located within a groundwater source protection zone. The use of multiple SuDS within the drainage design offer treatment. Of	Moderate Adverse	None Required	Negligible, which is **not significant**

Category	Description of Potential Effects Including Significance	Embedded Mitigation	Potential Effect	Further Mitigation	Residual Effect Including Significance
		surface water runoff. The volume of the proposed attenuation basins allows for dilution prior to discharging to ground.			
Agricultural Land	**Construction**				
	Loss of BMV agricultural land	Green infrastructure within areas of BMV land	Moderate to major adverse	None available	Moderate to major adverse, which is **significant**.
	Loss of or damage to soil resources	Undisturbed soils in areas of green infrastructure	Moderate adverse	Soil Resource Management Plan	Minor adverse, which is **not significant**
	Operation				
	N/A	N/A	N/A	N/A	N/A
Minerals	**Construction**				
	Mineral Sterilisation	None	Moderate to major Significant Adverse	Recovery of sand during preparatory earthworks	Moderate to major Adverse, which is **significant**
	Operation				
	N/A	N/A	N/A	N/A	N/A

15.4 A comprehensive assessment of the potential effects of the construction and operational phases of the proposed development has been undertaken as part of this EIA to establish the environmental changes associated with the development. The Proposed Development has been designed in accordance with the findings and recommendations of the EIA. Any adverse effects identified through the assessment have been minimised as far as possible through the design process or the application of appropriate mitigation measures. Those effects associated with the construction activities will be controlled by the CEMP.

15.5 Effects during the construction period are predominantly **negligible** or **minor adverse** for the majority of assessments, which are considered **not significant**.

15.6 In terms of **significant** construction effects, there is one **moderate adverse** impact which is **significant,** relating to disturbance at residential noise sensitive receptors adjacent to the Site due to noise associated with on-site construction activities. However, construction related impacts of this type are considered temporary, short term and reversible.

15.7 In addition, during construction there is potential for **Moderate to minor adverse** effects (which are **significant**) on archaeological assets, consisting of several findspots and Cefn Park Boundary stone (104513), as well as potential to impact unidentified archaeology within the site boundary.

15.8 Two **moderate to major adverse** effects, which are **significant**, are expected in relation to loss of Agricultural Land and sterilisation of the Mineral resource.

15.9 The proposed development would result in the permanent loss of 31.1ha of agricultural land, of which 29.2ha is classified as best and most versatile (BMV) agricultural land in Grades 2 and Subgrade 3a. However, the Site forms part of the strategic housing site KSS2, which has been allocated in the adopted Local Development Plan (LDP) in the full knowledge and understanding that a substantial area of BMV agricultural land would be lost from agricultural production, following a comprehensive assessment of agricultural land quality in the preparation of the LDP. The LDP has concluded that the harm caused by the loss of agricultural land is outweighed by the need to provide housing, infrastructure and other community facilities in sustainable locations.

15.10 The mineral resource on site has been considered nationally important prior to any site investigation works and seems to be based on the broad British Geological Survey (BGS) categorisation of glaciofluvial deposits being a Category 1 resource. Although there are no development proposals for mineral extraction at the site, and it is not considered that a targeted minerals extraction to a depth of 3m or below would be viable, the development would sterilise the underlying mineral.

15.11 On the basis that the resource is nationally important it is considered that a circa 867,000 tonnes sterilisation would be a **moderate to major significant** adverse effect. This is however on a low confidence level due to the doubts over the quality and demand of the underlying mineral. The impacts would be long-term, permanent and of regional level. A regional level has been determined as it is considered 867,000 tonnes of sand and gravel

would be important regionally but would not be significant on a national level. However, WCBC acknowledge that sterilisation of mineral will occur. Paragraph 4.192 of the LDP states:-

> *'Due to the extent and distribution of mineral within the County Borough and the need for non-mineral development such as housing, it is inevitable that some sterilisation will occur and this is accepted and established through the allocation of sites underlain by mineral in the LDP.'*

15.12 Outside of the impacts discussed above relating to agricultural land and minerals, the residual environmental impacts of the completed development with the implementation of mitigation measures range from **negligible** to **minor adverse**, all of which are **not significant**.

15.13 Although there are anticipated to be some significant adverse impacts as a result of the proposed development, it is important to weigh the potential direct and indirect benefits and improvements which will occur as a result of the proposals. The proposals comprise a high quality residential led development which offers new educational facilities, greenspace, community infrastructure and recreational opportunities and is in line with the strategic objectives of the Council as the site is within the KSS2 allocation.