

4. Environmental Evaluation and Compliance

4.1 Alignment with the Environmental Statement and Mitigation measures

Whilst the Design Manual's principal purpose is to guide the detailed design of Nansledan, it must also be read alongside the Environmental Statement 2020 which underpins the Nansledan Local Development Order (2021).

Through a detailed assessment process, the EIA has identified that the design and implementation phases must include mitigation which positively responds to the local environment and, where highlighted, it should mitigate the effects, where they are identified, of providing housing, employment space, retail and other community facilities.

The EIA process has been completed in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (the 'EIA Regulations') and provides:

- A set of three Parameter Plans which describe the broad layout of Nansledan that was assessed. The development approved by the LDO is defined by the Land Use, including Green Infrastructure; Access and Movement; and Building Heights Parameter Plans (see Appendix 1).
- A Description of Development which specifies the amount and types of land uses that are granted permission by the Local Development Order and which were assessed by the EIA.
- A series of technical assessments which establish the likely significant effects of Nansledan in accordance with the Parameter Plans and Description of Development and subsequent mitigation to reduce or alleviate those effects brought together in an Environmental Statement (ES).

It is therefore necessary to use the Design Manual alongside the Environmental Statement and, where identified, to follow the Parameter Plans, Description of Development, and the Mitigation Measures.

Failure to do so could result in development not according with the terms of the Nansledan Local Development Order (2021).

4.2 Mitigation Measures

The design and construction mitigation measures (Mitigation Measures) set out in the ES are incorporated into this Design Manual to ensure that all such measures required to render the environmental effects of the Nansledan LDO acceptable, are applied to all phases of development or other works brought forward under the LDO.

Section 4 of the Design Manual therefore acts as a compliance reference point and Table 1 below summarises the Mitigation Measures that shall be provided to achieve consistency with the ES. It should be noted that, whilst the table comprises a comprehensive summary of all mitigation presented in the ES, it will be necessary for developers and their consultants developing under the terms of the Nansledan LDO to refer back to the ES for more detailed information relating to the mitigation. This is to ensure that the environmental setting from which the mitigation is derived is fully understood as subsequently provided.

4.3 Development Flexibility

This EIA process has been carried out at the start of a substantial development project and as such, there may be, from time to time, a need to consider some limited flexibility with regard to the Parameter Plans and Mitigation Measures. Minor changes may not result in the need for a new EIA to be carried out and likewise may still fall within the scope of the LDO. As part of an on-going partnership with Cornwall Council, planning and technical advice should be sought on any changes prior to commencement of them.

4.4 Householder Development

Development classed as Householder Development will not be required to complete the Mitigation Checklist given that its scale and impact is unlikely to give rise to significant environmental effects.

4.5 Mitigation Checklist

Table 1 below provides a list of the Mitigation Measures that must be reviewed and where relevant, be applied to each development phase or phases.

Developers shall complete the checklist to highlight the relevant Mitigation Measures and state any areas where inconsistency is likely to occur.

The completed table shall be submitted to the Duchy of Cornwall, as Master Developer, prior to the commencement of development, to demonstrate how the development phase conforms with the LDO.

Development shall commence upon receipt of a Certificate of Conformity provided by the Duchy of Cornwall for such development.

Definitions applicable to the Mitigation Checklist

As an exemplar development process, the Duchy of Cornwall's development team will continue to consult stakeholders such as local residents and businesses and other interested groups, as it has done throughout the early development phases at Nansledan. It is, however, necessary as part of the LDO to specify where technical consultation with relevant officers at Cornwall Council must happen and where their agreement to further details of mitigations measures will need to be sought. To avoid any ambiguity, definitions for Consultation and Approval are set out below and are applied

where referred to in the Checklist below. Failure to adhere to the requirements for consultation and agreement set out in the Mitigation Checklist could result in a breach of Condition 1 of the LDO.

Definitions

Consultation: the relevant developer will provide written information to Cornwall Council to enable reasonable consultation with the relevant officer at Cornwall Council, such consultation to be carried out in accordance with the timescales set out in the prevailing Planning Performance Agreement.

Approval: written confirmation from the relevant officer of Cornwall Council to the relevant developer stating that the terms of the Mitigation Checklist have been satisfied in relation to a specific matter set out in the Mitigation Checklist, such written confirmation (i) not to be unreasonably withheld or delayed, (ii) to be provided within 28 days of registration (save where a written response is received from the Council within such period); and (iii) in the absence of a written response received from the Council within 28 days of registration such approval to be deemed to have been given.

DATE OF COMPLETED CHECKLIST:				
DEVELOPMENT PHASE REFERENCE (incl. boundary plan):				
EIA Topic	Mitigation set out in September 2020 ES:	Compliance	Proposed Mitigation within the development Phase <i>(To be completed by the developer)</i>	Proposed mitigation in a prior or subsequent phase and expected timing of delivery <i>(To be completed by the developer in consultation with the Duchy of Cornwall)</i>

All	Construction Environmental Management Plan (CEMP) (including Construction Traffic Management Plan)	<p>Principal Contractor to prepare a CEMP for each phase of development prior to commencement of construction and construction to proceed in accordance with the CEMP. (Framework CEMP provided with the ES).</p> <p>For each phase of development where the EA is an interested party (I.e. where development is proposed within 10 metres of a watercourse), the Principal Contractor will liaise with the Environment Agency to ensure that the Agency understands what construction drainage mitigation measures will be installed and at what stage in the initial construction process these will be provided. These measures will be submitted to the EA for information prior to the start of construction of that phase.</p>		
Transport and Access	Delivery of active travel routes	The network of active travel routes, including the Nansledan Walking/Cycling Route, and bus stops will be delivered as set out on the Access and Movement Parameter Plan and in the ES (including Transport Assessment) to ensure that local and future residents can travel as sustainably as possible.		
	Delivery of primary, secondary and tertiary streets	The network of primary, secondary and tertiary streets will be delivered as set out on the Access and Movement Parameter Plan and in the ES. Cyclists will be accommodated on the carriageway within the secondary and tertiary streets, in line with Manual for Streets guidance.		
	Delivery of suitable crossing points to reduce severance to active travel users.	Crossing points to be provided on all major desire lines that cross more heavily trafficked routes to ensure that active travel users do not experience severance within the development. These crossing points will take the form of formal uncontrolled crossings and informal courtesy crossings where drivers are encouraged to give way to active travel users.		
	Bus only link provided between Tretherras Road and Trevenson Road	<p>Provision of a bus only link between Tretherras Road and Trevenson Road along the southern edge of the Newquay Community Orchard, to enable buses to by-pass Henver Road and take more direct route to the centre of Newquay.</p> <p>Bus link to be for local bus traffic only and controlled either by physical barriers or by an ANPR camera.</p> <p>Active travel path to be provided at the bus gate.</p>		

	Travel Plan	Implementation of the Framework Travel Plan, including the setting of targets for the reduction of single occupancy vehicle travel and implement measures to promote active and sustainable travel so that walking, cycling and public transport become the obvious ways to travel to and from Nansledan. This includes a Review and Monitoring process, with reporting to the Council through the Position Statement. It is anticipated that the stewardship of the Travel Plan will be adopted by a local Sustainable Travel Forum.		
	Electric vehicle charging points	Passive and active electric vehicle charging points will be provided throughout the development to ensure a high level of EV charging can be facilitated as and when electric vehicles become more prevalent.		
	Further consultation with Highways England	If the implementation of total E(g) floor space (referred to as B1 prior to September 2020) within the LDO area is expected to exceed 18,227sqm during the following year, then Highways England will be consulted on the need and scope for capacity assessments for the A30/A39 Highgate Hill, A30/A3076 Mitchell and adjacent A3076 four arm roundabout and A30/A3075 Chiverton Cross Junction.		
Landscape and Visual	Implementation of the Green Infrastructure Strategy	For each phase of development, detailed designs must be prepared in accordance with the Green Infrastructure Strategy and the Land Use, including Open Space Parameter Plan to: <ol style="list-style-type: none"> 1) Ensure the long-term protection, maintenance and management of the existing vegetation to be retained, including trees, woodlands, many of the hedgerows and Cornish hedgerows across the Site, along with the wooded valley and wildflower planting within the eastern part of the Site. 2) Ensure the successful establishment of the proposed planting, including trees, woodlands, Cornish hedgerows, native hedgerows, and mounded hedgerows. 3) Maintain the high-quality character of the public realm, including street trees and other urban planting, play areas, Public Rights of Way and Public Open Spaces. 		
	Building heights	Each phase of the Proposed Development must accord with the Building Heights Parameters Plan.		
Biodiversity	Confirm ecology surveys (including monitoring) for the development are up to date	Consult with Cornwall Council's ecologist and complete any survey updates prior to ground works and commence in accordance with the findings.		

		<p>Developer Ecologists to complete monitoring surveys as prescribed in the ES, and to liaise with project manager / team to enable adjustment to the mitigation strategy if required on receptors where moderate adverse impacts have been identified.</p> <p>In respect of badgers, surveys will be required in advance of development on a phase-by-phase basis (to check for presence of setts) prior to updating the Badger Strategy. There will be a requirement (at least every five years) to update the bait-marking survey to provide a current basis for licence applications.</p> <p>Cornwall Council Ecologist to be advised if development is proposed which would alter buildings existing at the date this Order is made at Gusti Vean or Trewollack Farm.</p> <p>Detailed seasonal bat and bird surveys may be required well in advance of Natural England licensing.</p>		
	Construction methods - good practice on active sites	Mitigation for badger and hedgehog involves the provision of means of escape from pits and trenches at the end of each working day, in line with usual good practice.		
	Vegetation clearance – timing and methods	<p>Potential bird breeding habitat (woodland, hedges/ scrub) not to be cut between March-August inclusive; if unavoidable, the Developer Ecologist shall undertake a pre-clearance check for active nests.</p> <p>Dormouse - embedded mitigation involves staged approach to vegetation clearance and to report to the Duchy of Cornwall. Where hedges are to be affected, the initial winter cut would require an Ecologist-supervised fingertip search for nests prior to final clearance if works are undertaken before May.</p> <p>South-facing grassy banks to receive progressive vegetation cuts between March and October – first to 150mm then two weeks later to 50mm before clearance. If outside this period proceed as advised by Developer Ecologist.</p>		
	Provision of bird / dormouse nest boxes and bat roosts and other wildlife 'infrastructure'	<p>Bird, bat and insect provision to be provided within new buildings in accordance with up to date Cornwall Council Policy and as specified in the ES.</p> <p>A Wildlife Tower for barn owl and bat species (spec in accordance with ES or as advanced by Ecologist) to be constructed in the SANG in early 2021.</p>		

		<p>Bat and dormouse boxes to be installed on retained vegetation along Chapel Stream; the exact specification and numbers to be agreed with Cornwall Council's Ecologist.</p> <p>Otter ramp shall be fitted under the new NSR bridge as well as provision for hedgehog passages in all new gardens.</p> <p>Reptile refuges shall be provided in the green infrastructure (GI) corridor.</p> <p>Developer Ecologist to liaise with landscape architects during each phase of GI corridor Landscape Strategy preparation.</p>		
	Achieve a minimum of 10% Biodiversity Net Gain (BNG) in line with emerging legislation and national / local policy	<p>Assess Biodiversity Net Gain against ES expectations for the relevant land parcel and record any off-setting or additional credit achieved. As development proceeds, log the progressive 'draw down' against credits obtained through delivery of the SANG and GI corridor.</p> <p>The BNG calculations will include for rivers and streams.</p>		
	Landscape Environmental Management Plan	<p>As for previous phases of development, a LEMP will be prepared for each phase of development and the development will proceed in accordance with the LEMP.</p>		
Lighting	Control of lighting during the construction phase	<p>Measures to control lighting during construction to be included in the CEMP. This will need to follow the measures set out in the Lighting Strategy (Appendix I.8 of the ES).</p>		
	Control of lighting during operation of the development	<p>Mitigation of the effects of the lighting installation during the operational phase, including mitigation of effects on ecology and in particular bats, will be achieved by designing the lighting for the development in accordance with the Lighting Strategy (Appendix I.8 of the ES).</p>		
Air Quality and Odour	Standards for gas-fired boilers	<p>All individual gas fired boilers will meet a minimum standard of <40 mgNO_x/kWh</p>		
	Park & Ride facility	<p>Impacts associated with the P&R provision are expected to be not significant, however when the P&R comes forward, if required depending on its size and layout, a detailed air quality assessment may be required, with appropriate mitigation measures identified to ensure impacts are not significant. Cornwall Council's Environmental Protection Officer will be consulted on the scope of the air quality assessment for the P&R facility.</p>		

	Household Waste and Recycling Centre	It is anticipated that the facility would be the subject of environmental permit and an emissions and odour mitigation plan would be developed as part of the permit to ensure that significant adverse impacts are avoided and adverse impacts are minimised to adjacent receptors. Mitigation plans will be prepared in consultation with, submitted to, and approved by CC.		
	Potential from odour from commercial developments	Where commercial developments are proposed which have the potential to generate odours, odour impacts from commercial plant/processes will be assessed to a method agreed in consultation with CC. Where a commercial Kitchen extract is proposed it shall be assessed in line with Control of Odour and Noise from Commercial Kitchen Exhaust Systems, EMAQ+ (2018). Mitigations to be approved by CC.		
Noise and Vibration	Consultation and agreement with CC	Where noise considerations are required, agreement should be made with CC on suitable acoustic assessment methodology. Reference will be made to any relevant ES findings and to the requirements of the Cornwall Council Development Sound Standard (DSS) (or any replacement thereof)."		
	Residential developments	New residential developments should be considered against the criteria of the DSS, and for each phase of development that includes residential uses an Acoustic Design Statement (ADS) should be produced following the methodology of ProPG (Planning and Noise: Professional Practice Guidance on Planning and Noise – New Residential Development). ADS to be approved by CC. Detailed layout plans shall be in accordance with the ADS and will provide acoustic mitigation requirements including acoustic barriers, and glazing and ventilation specifications.		
	Residential glazing and ventilation for acoustic mitigation	The proposed dwellings will be constructed to meet current building regulations requirements including thermal performance and ventilation. Mitigation measures as set out in the ADS will be applied where required to meet DSS criteria		
	Commercial Developments	Where commercial developments are proposed, the potential noise impacts will be assessed in respect of existing residential receptors as well as future land parcels. Assessment will follow the guidance of the DSS and consultation with CC. Mitigation proposals to be approved by CC.		

	Relocation of Household Waste and Recycling Centre (HWRC)	CC will be consulted on the HWRC proposed location, designs and mitigations, intended to reduce sound levels at the nearest sensitive receptors to reduce sound levels at the nearest sensitive receptors and within the requirements of the DSS with details to be approved by CC.		
	Construction noise and vibration management plan	<p>A construction noise and vibration management plan in accordance with BS5228:2009+A1:2014 (Code of practice for noise and vibration control on construction and open sites) to be included within the CEMP for each phase of development, with typical hours of operations to be limited to;</p> <ul style="list-style-type: none"> • Monday to Friday 0730 to 1800 hours • Saturdays 0730 to 1300 hours <p>With no work to take place on Sundays or Public Holidays. Particular care shall be taken to manage noise before 0800 hrs.</p> <p>It is expected where practicable and feasible that longer term (e.g. 3+ days) on-site construction vehicles be fitted with broadband white noise reversing alarms. Details of feasibility assessment to be kept for any longer term on-site vehicles without broadband white noise reversing alarms, and to made available upon request by CC.</p>		
Water Resources and Flood Risk	Surface Water Management Plan	<p>Each phase of development shall be constructed in accordance with the Surface Water Management Plan as set out in the Flood Risk Assessment (Appendix L.1 of the ES) unless another Plan is subsequently agreed with Cornwall Council's Drainage Officer. This Plan has been developed and implemented across all completed phases of development to ensure surface water runoff is attenuated in up to the 100 year return period storm, with the latest upper-end allowances for climate change. In accordance with the drainage hierarchy, infiltration-based drainage must be prioritised wherever conditions allow, otherwise discharged flows from each development parcel will not cumulatively exceed the agreed greenfield runoff rates for the respective catchment.</p> <p>The strategy protects the Site from flooding whilst also ensuring the risk of flooding to downstream properties is not being increased. This also identifies the foul drainage solutions.</p>		

	SuDS	<p>The use of SuDS serves to attenuate and improve the quality of surface water runoff from the Site minimising the risk of contaminants such as hydrocarbons and silts entering surrounding surface water courses and underlying groundwater.</p> <p>SuDS features that cater for surface runoff solely from adopted highway areas have become the responsibility of the adopting authority and are covered as part of an S38 agreement. The adopting authority maintain their assets to mitigate deterioration of performance.</p> <p>SuDS features within non-adopted areas have remained private and where located on plot are the responsibility of the individual homeowner, or otherwise a management company is appointed for the maintenance of communal features to mitigate deterioration.</p> <p>For each phase of development, SuDS features will be delivered as set out in the ES and Flood Risk Assessment and wherever practicable will be integrated into green infrastructure proposals.</p> <p>SuDS features will consider the delivery of multiple benefits through each of the four pillars that underpin the SuDS Manual and the delivery of high-quality SuDS, i.e. manage flood risk and water quality, provide amenity and enhance biodiversity.</p> <p>Cornwall Council's Drainage Officer will be consulted on the design of SuDS feature on a phase by phase basis prior to implementation.</p>		
	Culvert Design for rivers and streams	Where culverts are required to accommodate development over rivers and streams, the prevailing best practice for culvert design will be followed to minimise negative impacts on sediment movement and fish and eel passage.		
Archaeology and Cultural Heritage	Programme of archaeological works	Prior to commencement of any phase of development, a staged programme of archaeological works will be implemented. The works will consist of two stages: (1) a programme of further evaluative work comprising targeted trial trenching, followed by (2) a programme of archaeological excavation, recording, reporting and archiving of significant remains.		

		<p>Targeted trial trenching would test the results of the geophysical survey and confirm the extent of the eight identified Areas of Archaeological Interest (AAIs), and the nature of their significance more precisely. It would also provide data which would allow a strategy for archaeological excavation and recording to be agreed with Cornwall Council's Archaeologist, and would identify which areas within the Site require further excavation and recording, and which areas contain no buried remains of interest and can therefore be developed without further works. The scope of the trial trenching has been agreed with Cornwall Council, and the trenching plan is provided in Appendix M.1 of the ES.</p> <p>Archaeological works for each phase will proceed in accordance with the agreed approach with Cornwall Council's Archaeologist.</p> <p>The archaeological evaluation must be completed first to inform any subsequent mitigation works, such as archaeological excavation. This latter will be subject to a Written Scheme of Investigation (WSI) that will be consulted on and agreed with Cornwall Council.</p> <p>The WSI shall include:</p> <ol style="list-style-type: none"> 1. a programme and methodology of site investigation and recording; 2. a programme for post investigation assessment; 3. provision for analysis of the site investigation and recording; 4. provision for publication and dissemination of the analysis and records of the site investigation; 5. provision for archive deposition of the analysis and records of the site investigation; and 6. nomination of a competent person or persons/organisation to undertake the works set out within the WSI. 		
	<p>Programme of archaeological excavation, recording, reporting and archiving</p>	<p>Once the scope of the excavation works, supported by the WSI is agreed with Cornwall Council, the programme of excavation, recording, reporting and archiving of the agreed areas would be implemented by the Developer team. This would comprise a full programme of archaeological excavation, carried out in accordance with the Chartered Institute for Archaeologists standard and guidance for archaeological investigations (ClfA 2014) (or any</p>		

		<p>updates), to include digital recording and reporting of results. The excavation works would result in an academic publication to further regional research objectives, a quantified and assessed archive to allow for further research of the evidence retrieved, and also opportunities for popular level outputs to enhance local education.</p> <p>This programme of works would be set out in a mitigation strategy which would be agreed with CC, and which would govern how the works are to be implemented.</p>		
	Measures to retain and preserve the setting of the historic buildings at Gusti Veau	<p>The mitigation measures at set out in Section 3.0 Design, A – Urban Design, Heritage Setting of this Design Manual will be implemented at Gusti Veau, to retain and preserve elements of the significance of the historic buildings.</p> <p>Consultation shall take place with Heritage Environmental Planning (Conservation) regarding the design and siting of new buildings, boundaries and landscaping buffers proposed immediately adjacent to listed buildings at Gusti Veau and Trewollack prior to their development.</p>		
Ground Conditions and Contamination	Compliant earthworks management	Earthworks shall be completed in accordance with a CL:AIRE compliant Materials Management Plan (MMP) to be prepared by the Principal Contractor prior to the commencement of any site preparation works.		
	Compliant soil management operations	Soil management operations shall be generally in accordance with the most up to date guidance and best practice guidance documents, to be set out by the Principal Contractor prior to the commencement of any site preparation works.		
	Handling and storage of fuels and oils on site	To minimise the risk of pollutants entering controlled waters, handling and storage of fuels and oils will adhere to EA guidance, procedures to be set out by the Principal Contractor prior to the commencement of any site preparation works.		

	<p>Further ground investigation for areas of higher risk as identified in the ES</p>	<p>Within areas of concern identified within the Phase 1 report (Appendix N1 of the ES), notably areas of former landfill and electricity substations, as well as areas of made ground, mining waste and workings; mineralised lodes/ veins, possible contaminative land uses within farmsteads; and the HWRC, further ground investigation is required prior to commencement of construction of any phase to determine whether contamination remediation measures (e.g. localised contaminated soil removal or capping of gardens) are required to protect human health and controlled waters. The investigation and assessment process will be completed in accordance with the LCRM guidance document and reports are to be checked by a Suitably Qualified Person (SQP) as part of the National Quality Mark Scheme (NQMS) for Land Contamination Management. Following completion of a ground investigation the report will be consulted on prior to commencement of development and agreed with Cornwall Council Environmental Protection team and, where applicable, the Environment Agency.</p>		
	<p>Remedial measures in the event that contamination is identified</p>	<p>Following ground investigation for areas of likely higher risk as set out in the ES, contamination remedial measures may be required. The remedial measures in a remediation scheme will be completed in accordance with the LCRM guidance document and reports are to be checked by a Suitably Qualified Person (SQP) as part of the National Quality Mark Scheme (NQMS) for Land Contamination Management.</p> <p>Following a thorough appraisal of all of the available options, contamination remedial measures will be consulted on prior to commencement of development and agreed with Cornwall Council Environmental Protection team and the Environment Agency (for any areas where the preliminary investigations have identified a moderate or high risk that the land or proposed works may cause or exacerbate pollution to controlled waters). They shall be implemented in full as agreed.</p> <p>(Note: these are likely to follow methods that have been successfully implemented in areas of contamination that have already been identified, e.g. Gusti Veor Quarry landfill, where following ground investigation, a capping layer of clean soil was</p>		

		placed in garden/ soft landscaped areas and gas protection measures were installed into the ground floor construction of buildings. Alternatively, localised contaminated soil removal and/or treatment may provide a more suitable remedial measure.		
	Verification of contamination remedial measures	<p>Following the completion of measures identified in the approved remediation scheme, a verification report that demonstrates the effectiveness of the remediation carried will be produced. The verification report will be completed in accordance with the LCRM guidance document and reports are to be checked by a Suitably Qualified Person (SQP) as part of the National Quality Mark Scheme (NQMS) for Land Contamination Management.</p> <p>Following completion of a verification report this will be submitted to and agreed with Cornwall Council Environmental Protection team and where applicable, the Environment Agency.</p>		
	Reporting of unexpected contamination	In the event that contamination is found at any time when carrying out the approved development that was not previously identified, the procedures set out in the three sections above will be followed.		
	Foundation works risk assessments	In the event that elevated levels of contamination are identified, a foundation works risk assessment will be undertaken.		
	Risks associated with past mining	<p>In areas of the site where the Phase 1 report (Appendix N1 of the ES) identified past mining operations, further ground investigation is required to assess the risks associated with past mining and appropriate mitigation measures are designed and constructed. These will be set out and agreed with Cornwall Council Building Control team prior to commencement of development of each phase and implemented in full as agreed.</p> <p>Structural remedial measures could include capping of mine shafts, drilling and grouting of subsurface voids and/ or reinforced foundations.</p> <p>Similar to contamination aspects, if any unexpected past mining features are identified during future general ground investigation or construction work, additional investigation will be required, following which remedial measures can be designed and implemented.</p>		

Community	Achieve the 10 Vision Principles	Assess proposals against the achievement of the 10 Vision Principles.		
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