

Project:	Tregay, Liskeard		
Technical Note:	Planning Layout Strategy		
Date:	21/02/2024	Originator:	David WJ Patterson

## **Introduction**

This Technical Note has been prepared to support the proposed development at Tregay, Liskeard. The site is located to the northern edge of Liskeard and to the east of the B3254. The site is currently greenfield and has existing embankments along the western boundary edge to the B3254 with the remainder of the site being tree/hedgerow bounded. The development site is split into 3 distinct parcels with dry stone walls defining the areas. The site levels vary from 146.62mAOD on the western boundary with the B3254 to 120.32m AOD in the southeastern corner of the site. The site has an average gradient of 1 in 10 with sections of the site at around 1 in 8.



Fig 1 – Site Location

This Technical Note should be read in conjunction with drawing 2205\_001 Preliminary Infrastructure Review. The Preliminary Infrastructure Review drawing has been prepared based upon seeking to achieve an optimised and balanced layout to address the site levels and constraints. The drawing includes, for reference, embankment areas at 1 in 3 to the highway's corridors. It is anticipated that these will be ultimately mitigated through building types, FFLs and plot arrangements.

## **Site Constraints**

The site gradients as detailed above present challenges with regards to the site highways layout and arrangement particularly the vertical alignments when seeking to achieve the Cornwall Design Guide Standards.

Preliminary Ecology investigations have detailed a requirement for a 10m no light buffer along the eastern boundary and through the east/west hedgerow to address any ecological concerns.

There is an existing sewer located running along the western boundary of the site which it is intended to be diverted and rerouted through the final site layout as necessary.

There is an existing telecoms overhead route to the adjacent farm which will be diverted as necessary.

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## **Planning Layout Proposals - Highways**

The planning site layout has taken consideration of the critical site constraints and the Cornwall Design Guide to identify a viable road and site development parcel strategy.

The proposals will see the site considered as 3 separate parcels northwest, southwest and southeast.

The main site access is located from the B3254 on the western boundary. It is proposed that this will include localised widening and provision of a right turn lane to aid access into the development under a S278 agreement. The site access position has been chosen as it is located close to the ridge point of the site where levels of the existing road and site are commensurate. The positioning of the access junction also facilitates good visibility in both directions.

The site will be provided with a 20MPH speed limit and appropriate speed control/management features including use of materials, vertical speed tables or narrowing's as appropriate.

It is proposed that the entrance road into the site will be 6m wide with a 2m verge and offset 1.8m footways with the intention of creating an entrance boulevard into the development. This section of road will provide the necessary junction 1 in 40 gradient platforms but due to the site levels will incorporate a section of 1 in 10 gradient road for a length of approximately 10m to minimise level impacts within the site.

The entrance boulevard will then join the central crescent feature located in the core of the site which will provide POS and highways soakaway/basin storage. This crescent feature will act as a hub and routing point for each of the parcels. This road will be a 5.5m wide road with footway provided on the outer side of the crescent area. The inner area will be POS and appropriate pedestrian links will be provided. The central crescent also provides connectivity with the north south green corridor along the existing dry stone wall hedgerow which will be retained offering resident's amenity space and benefit.

Each of the parcels will then be serviced from this central crescent hub by a 5.5m carriageway and 1.8m footways with appropriate turning head facilities in line with the Cornwall Design Guide. Again, each of the roads will provide the necessary 1 in 40 gradient platforms at junctions and will only seek to use a 1 in 12 maximum road gradient.

It is noted that the Cornwall Design Guide "normally" seeks for access roads/developments which have more than 100units to have a loop road as well as providing 2 points of access. The significant site constraints and gradient restrictions prevent these being achieved. It is therefore considered that the provision of the wider residential distributor road site entrance way and the central crescent allows each of the parcels to be considered on their own merits without the need for these additional measures. It is anticipated that each of the parcels will contain up to 45 units subject to specifications and architectural detailing.

The proposed arrangement provides suitable access and movements for fire and refuse to the proposed development parcels as well as the Foul Water Pumping Station as detailed below.

Addition of some private driveway access routes and parking courtyards are expected to suit frontages and provide acceptable elevation treatments to road/units. Some locations, such as the eastern boundary will require the use of split-level house types and underbuild to mitigate changes in levels as well as terracing of garden spaces.

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## **Planning Layout Proposals - Drainage**

The preliminary geotechnical investigations have identified that infiltration will be viable for the site. Therefore, as part of the site road layout and levels consideration the need to match as close as possible to existing site levels to provide a SuDS drainage strategy has been considered. As such the drainage strategy for the site is as follows:

*North Western Parcel* – House Soakaway units. Highways adoptable basin/soakways located within the Crescent POS area.

*South Western Parcel* – House Soakaway units where levels permit. Highways conveyance swale infiltration systems along POS Green Corridor.

*South Eastern Parcel* – House Soakaway units where levels permit. Highways and Private Infiltration Basin.

Due to the remote nature of the site and the pre/post development topography the site will require the provision of an adoptable Foul Water Pumping Station. This is located on the southern boundary in the south eastern parcel based upon level, access and easement requirements.

## **Planning Layout Proposals - Housing**

With the application of the proposed site highways arrangement and layout the majority of the site can be provided with standard house types. Garden areas will include roll overs and retention along fenclines as necessary to mitigate level variations. Wherever possible units will be provided with house soakaway units to manage rainfall at source.

As noted above it is anticipated that each parcel will have up to 45 units with associated parking, access and garden space.

## **Conclusions**

Whilst the site presents challenges with regards to its existing topographical levels and gradients the application of the distributor access road and central crescent hub allows the site to be considered in a parcelled approach in line with the Cornwall Design Guide requirements.

The site has the opportunity through the proposed site layout and levels strategy to seek to optimise the use of SuDS drainage in each parcel in line with current guidance.

The site layout provides a central public realm feature and green corridor for residents to use and benefit from.