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Date 10th October 2025.

RE : Sykes Bros Ltd.

Farm Development at Effenogue, Ferns, Wexford.

SLOPE STABILITY ASSESSMENT.

Introduction.

Capital Surveys Ltd was engaged by Sykes Bros, to undertake a Slope Stability Assessment Effenogue, Ferns, Wexford. The proposal is for to confirm the stability of an excavated bank and to design a retaining wall to allow the farm be developed in to the future.

A site survey was undertaken on June 14. The survey captures the extent of the excavation and also identified:

1. A site classification for the site of the proposed additions to the existing facility;

2. Determine the existing soil subsurface profile within the site, including groundwater levels;
3. A slope stability assessment for the site;
4. Comments on geotechnical development guidelines in relation to site earthworks, structures and foundations, retaining walls, and drainage;
5. Discussion of footing alternatives, including founding levels and recommendations on allowable bearing pressures;
6. Provide excavation conditions for the site;

Site Description.

The development in an existing Farm yard setting. Some excavation have been undertaken on site with the shale / stone / rock being used to level out a section of the farm to facilitate its expansion.

The scope of the slope stability assessment is to carry out a stability inspection of the side road slopes of the Farm facility. This includes the current excavation and soil slopes within the footprint of the site. The slope assessment is based solely on a walkover and visual inspection of the slopes and as such cannot result in a definitive assessment of slope stability. Locations determined for more detailed assessment will be identified in the findings and recommendations.

The visual inspection of the slopes and environs looks for the following:

- Signs of distress – e.g., cracking;
- Signs of movement – e.g. bulging in the slope and / or depressions at the top of the slopes;
- Disturbance of, or discontinuities in, vegetation; and
- Evidence of movement or distress to surrounding structures or features.

Slope Stability.

The purpose of the slope stability assessment is to determine the degree of risk of slope movement and whether the adjoin road would be likely to suffer damage as a result of any slope instability due to landslide. For the purpose of this report, landslide is the movement downhill of material comprising the hillside. Landslide is brought about through the development of shear failure surfaces within the soil mass. The subsequent movement can be rapid enough to pose a threat of damage, or actual damage, well within the expected lifetime of the building development.

This landslide movement is to be distinguished from land creep, which takes place slowly over long periods of time and may affect gentle as well as steep slopes.

There is always some degree of risk associated with hillside construction when compared with construction on flat land. It is not practically possible to make an assessment which would categorically class a hillside site as either safe or unsafe, however, a range of risk classifications can be considered as follows –

Risk Level.

Example Implications

VH. Very High Risk Unacceptable without treatment. Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to Low; may be too expensive and not practical. Work likely to cost more than the value of the property.

H. High Risk Unacceptable without treatment. Detailed investigation, planning and implementation of treatment options required to reduce risk to Low. Work would cost a substantial sum in relation to the value of the property.

M. Moderate Risk May be tolerated in certain circumstances (subject to regulator's approval) but requires investigation, planning and implementation of treatment options to reduce risk to Low. Treatment options to reduce to Low risk should be implemented as soon as practicable.

L. Low Risk Usually acceptable to regulators. Where treatment has been required to reduce the risk to this level, ongoing maintenance is required.

VL. Very Low Risk Acceptable. Manage by normal slope maintenance procedures.

Eastern Boundary Side Slope.

The boundary has been excavated and the shale, stone and rock has been removed to level the existing farm yard for future development. The side slopes are well graded and vegetated on the majority of the excavation. The side slope shows no visible signs of distress. The exposed faces consist of a stable shale and stone.

RECOMMENDATION:

The application is proposing to build a reinforced concrete wall to retain the vertical bank which will also allow this section of the farm to be developed.

Evidence of Slope Instability.

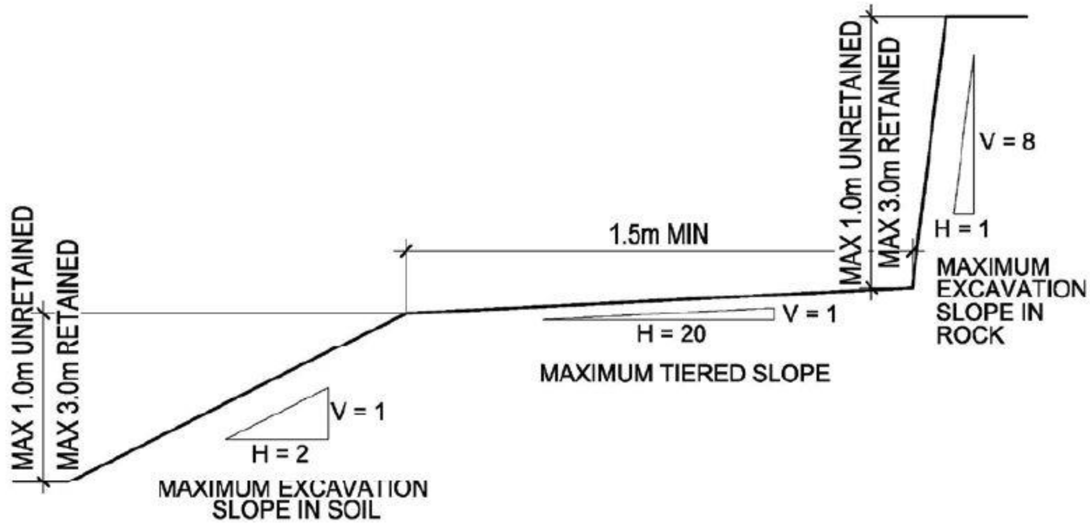
There is no visible evidence of slope instability on the subject lot or surrounding lots.

Stability Assessment.

General Assessment – Underlying Features
The site is assessed as having a very low risk of slope instability in its present condition of development. The loads imposed on the subsoil by future proposed development are expected to cause no slope instability if the foundation of the structure is upon rock. Due to this, the slope stability of the subject lot in its developed state is deemed to be at very low risk of slope instability.

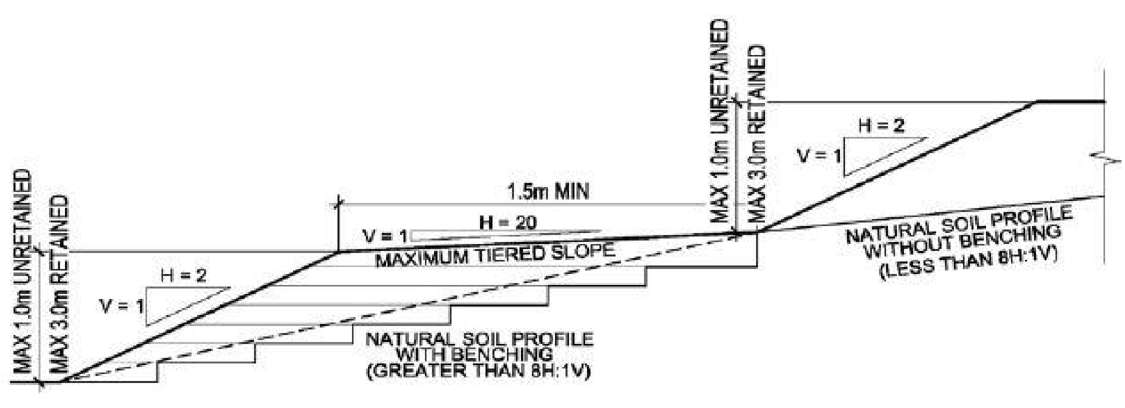
Local Assessment – Construction - Features
It is recommended however that the slopes on the existing batters not be made steeper in any cut-fill operations undertaken on the subject lot. A proposed retaining wall is proposed to allow a future agricultural building to be constructed in this section of the site. The retaining wall will be approx. 8m high.

Report Limitations.



Fill in excess of 1.0m must be retained by an engineer designed retaining wall. Un retained fill less than 1.0m in depth should be battered in accordance with the requirements of the Building Regulations, but in no case should be steeper than 2H:1V and must be protected from erosion. Fill should be placed in maximum 200mm deep layers and be compacted to 100% maximum dry relative density for cohesive material or 70% relative density for non-cohesive (sand) material, and generally in accordance with the requirements.

Where fill is placed on slopes greater than 8H:1V, the natural surface should be benched prior to the placement of fill material. Tiered batter slopes must be separated by a minimum distance of 1.5m. Separation distances must not contain a slope in excess of 20H:1V. It is recommended that the maximum filling height not exceed 3m without further geotechnical investigation and approval. Figure 3 below diagrammatically shows the above fill guidelines.



The site is suitable for footing systems such as strip footings or stiffened raft slab footing system supported on firm natural material, founded below any existing topsoil. The footing systems must be designed by a structural engineer in accordance with engineering principles . A geotechnical engineering inspection is recommended prior to pouring of recommended foundations.

Retaining Walls

The construction of any new retaining walls should be designed by a practicing structural engineer. It is essential that retaining wall foundations are fully embedded in natural (non-filled) ground and the foundation subsoil and be designed as fully drained. A retaining wall section is included in the details.

Signed

Chartered Civil Engineer ICE.