## AGENDA ITEM 8

# APPENDIX I

# 2018/0210/DET

## PLANS





Rural Payments and Inspections Directorate

# Location Code 442/0055 Map 1 of 1

Land Parcel S	vstem	Version	Date :	11

Counter	Land Parcel Identifier	Area(Ha)
1	NN/67353/94145	20.82
2	NN/67491/94416	5.74
3	NN/67660/94281	3.52
4	NN/67749/94839	30.41
5	NN/67818/94332	3.38
6	NN/67858/94472	1.65
7	NN/67981/94574	5.03
8	NN/68131/94014	104.2
9	NN/68136/94817	1.3
10	NN/68155/94642	5.38
11	NN/68203/95598	45.36
12	NN/68395/95007	6.08
13	NN/68545/94816	9.02
14	NN/68880/95376	6.44

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1 September 2017

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# **Total Area: 248.33 Ha**

### Glentruim Mains Track



#### Photo from A86 Lochan Uvie—Pre upgrade May 2015



Photo from A86 Lochan Uvie—Post upgrade May 2018

## Glentruim Mains Track

Photographs showing the track construction and use of turf to cover soils on cut and fill slopes





## **Glentruim Mains – Agricultural Track Outline Specification**

Item	Design Specification
Design Speed	25km/h
Design Loading	44 Tonnes
Road Width	2.8 metres (+/- 200mm) – widened on the inside of bends to suit radius
Maximum Gradient	10% with small lengths, less than 200 metres, up to 12.5% allowable with Caution
Minimum Gradient	2%
Road Construction Depth	Chosen in relation to CBR of Subgrade. Varies from 150mm to greater than 850mm
Construction	Water bound using onsite materials as available
Surfacing	As required using good quality gravel on onsite
Cross Slope (Camber / Cross fall)	Camber preferred. 4.5% minimum, above 8% to be used with caution.
Culverts	Twinwall HDPE pipes. Minimum size 300mm, spacing as required.

#### **General**

- 1. The road formation shall be constructed to a uniform horizontal and longitudinal. The longitudinal gradient shall not exceed 8% nor be flatter than 2%.
- 2. The locations of all utilities, including water supplies, are to be clearly marked and adequate safety measures established for hazards such as overhead power cables.
- 3. Works shall comply with the Forests and Water Guidelines, 5th Edition. All reasonable precautions shall be made to minimise erosion and transfer of soils and materials into watercourses. Existing watercourses must not be led into side drains. Accumulated surface water on the formation must be regularly routed into adequate catch pits/silting lagoons during construction.
- 4. Spillage of fuel, oil and chemicals must be prevented. In the event of any sizeable spillage or pollution of any watercourse the "Action Plan for Fuel and Oil Spillages" must be implemented immediately.

#### **Earthworks and Formation**

- 5. Soil and all unsuitable materials are to be totally stripped turfs must be retained to cover bare soil exposed during construction.
- 6. Earthworks and the formation shall be shaped to the specified camber or falls and be free of standing water. The formation shall be sited on undisturbed ground, compacted where possible and free of any ruts and unsuitable material.
- 7. Where small outcrops of rock are encountered on the alignment, they shall be removed by digging or breaking. Deposits may yield suitable base course or wearing course stone.
- 8. When fill is used to create an embankment, the fill material shall be free draining and non-cohesive.
- 9. Fill shall be placed in layers that can be effectively compacted to form a stable embankment. Allowance should be made for settlement to achieve the finished formation level and for the fill material to reach its natural angle of repose.
- 10. When the road is laid over peat, sufficient fill shall be placed to ensure that settlement and distortion of the embankment is minimal when fully loaded.
- 11. Roadside batters shall be cut to a stable and even angle of repose free of overhangs and loose rock. All surplus excavated material shall be spread evenly onto the ground adjacent to the low side of the road without impeding drainage and/or access to and from that ground.
- 12. All road side batters and excavated materials shall be covered using turfs retained from stripping the road formation.
- 13. Where 'Diffuse Pollution' Pipes are to be installed, the position of the pipe should be cut into the road formation at the time of forming the drain to avert silt from entering the main watercourse. The roadside drain between the diffuse pipe and the watercourse should be left unexcavated.

- 14. The minimum width of the formation shall be 3.5m plus extra for each side drain constructed where the ground alongside the road is above formation level except when the formation is on rock when this width can be reduced to 3.2 m.
- 15. The formation width will be increased proportionately for bends and passing/turning places.
- 16. Roadside drains shall have a depth of not less than 450 mm below the formation edge and a longitudinal gradient of not less than 2%.
- 17. Catch pits, settlement ponds and filters will be provided in and adjacent to the drains to avoid pollution and sedimentation of watercourses.
- 18. Watercourses shall be kept clear of lop and top and all other deleterious materials.

#### **Culverts**

- 19. No culvert for a natural burn crossing shall be placed on fill. The culvert shall be laid on the bed line and level, the bed being regulated as necessary by excavation or by filling of local hollows with bedding materials well tamped into place.
- 20. All culverts shall be laid in undisturbed ground.
- 21. Culverts to be protected and well bedded to avoid settlement. Trenches shall be excavated down to firm ground with all peat removed where practicable.
- 22. Inlets and outfalls to be provided with erosion protection.
- 23. All culvert inlets and outlets shall be protected by random masonry head/ tail walls
- 24. Twin walled, thermoplastic, high-density polyethylene pipes meeting the British Board of Agreement Highways Authorities Product Approval Scheme specification shall be used for constructing culverts. Pipes shall be laid on a bed of 100mm down granular material and backfilled with compacted granular material. Backfill material will be compacted in 100mm layers to spring point of pipe using a vibro-plate or similar type equipment. The minimum depth of cover shall be the diameter of the pipe.
- 25. The maximum excavated width of trenches shall be the pipe diameter plus 600mm.
- 26. During bedding and pipe laying, the excavation shall be bunded to avoid inundation. If pumping is required to remove excess water; then the discharge should pass through settlement ponds and/or filters before re-entering the river.

#### **Pavement Construction**

- 27. Unless specified otherwise, the pavement shall consist of a base course and a wearing course. Additionally in soft ground, a capping layer will be constructed to strengthen the formation.
- 28. All pavement materials shall be free draining rock or gravel.
- 29. The minimum compacted depth of the courses shall be twice the maximum aggregate size of the materials being used.
- 30. Pavement thickness will depend upon the California Bearing Ratio of the finished formation. Table 1 gives guidance.

TABLE 1 Soil Description	CBR	Pavement Thickness mm.	
		Crushed Rock	Rock as raised
Soft Clays	2	700	900
Poorly drained silty clay or badly drained sandy clay	4	475	600
Well drained silty clay and good mineral soils	6	350	450
Poorly drained granular materials	10	250	325
Well drained granular materials and rock	15	200	250