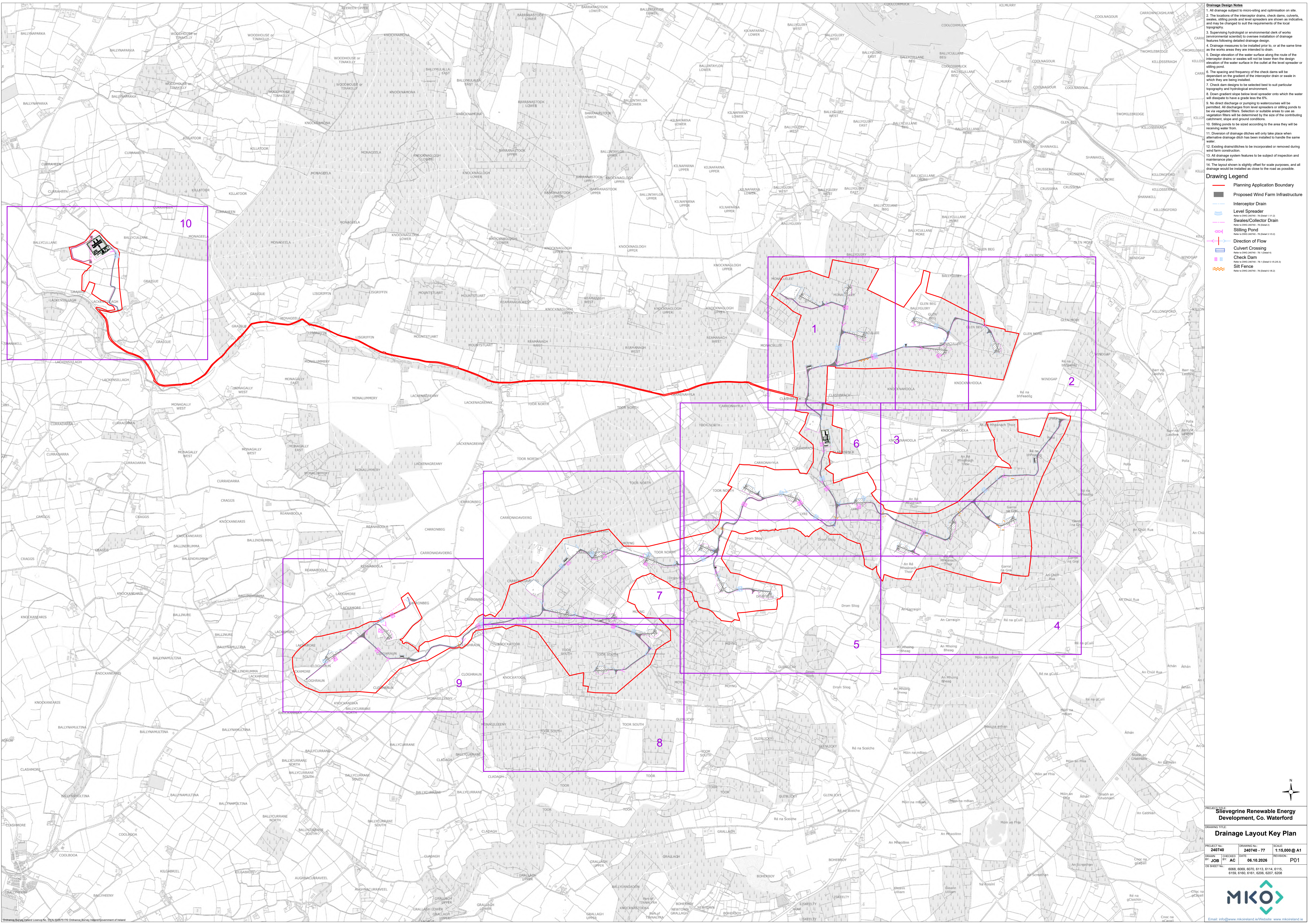




APPENDIX 4-2

DRAINAGE DESIGN



- Drainage Layout Key Plan**
1. All drainage subject to micro-siting and optimisation on site.
 2. The locations of the interceptor drains, check dams, culverts, swales, silt ponds and level spreaders are shown as indicative, and may be changed to suit the requirements of the local topography.
 3. Supervising hydrologist or environmental clerk of works (environmental specialist) to oversee installation of drainage features following detailed drainage design.
 4. Drainage measures to be installed prior to, or at the same time as the works areas they are intended to drain.
 5. Design elevation of the water surface along the route of the interceptor drains or swales will not be lower than the design elevation of the water surface in the culvert at the level spreader or silt pond.
 6. The spacing and frequency of the check dams will be dependent on the gradient of the interceptor drain or swale in which they are being installed.
 7. Check dam designs to be selected best to suit particular topography and hydrological environment.
 8. Down gradient slope below level spreader onto which the water will dissipate to have a grade less the 0%.
 9. No direct discharge or pumping to watercourses will be permitted. All discharge from level spreaders or silt ponds to be via vegetated filters. Selection or suitable areas to use as vegetation filters will be determined by the size of the contributing catchment, slope and ground conditions.
 10. Silt ponds to be sized according to the area they will be receiving water from.
 11. Diversion of drainage ditches will only take place when alternative drainage ditch has been installed to handle the same water.
 12. Existing drainage ditches to be incorporated or removed during wind farm construction.
 13. All drainage system features to be subject of inspection and maintenance plan.
 14. The layout shown is slightly offset for scale purposes, and all drainage would be installed as close to the road as possible.

Drawing Legend

- Planning Application Boundary
- Proposed Wind Farm Infrastructure
- Interceptor Drain
- Level Spreader
- Swale/Collector Drain
- Silt Pond
- Direction of Flow
- Culvert Crossing
- Check Dam
- Silt Fence

Drainage Layout Key Plan

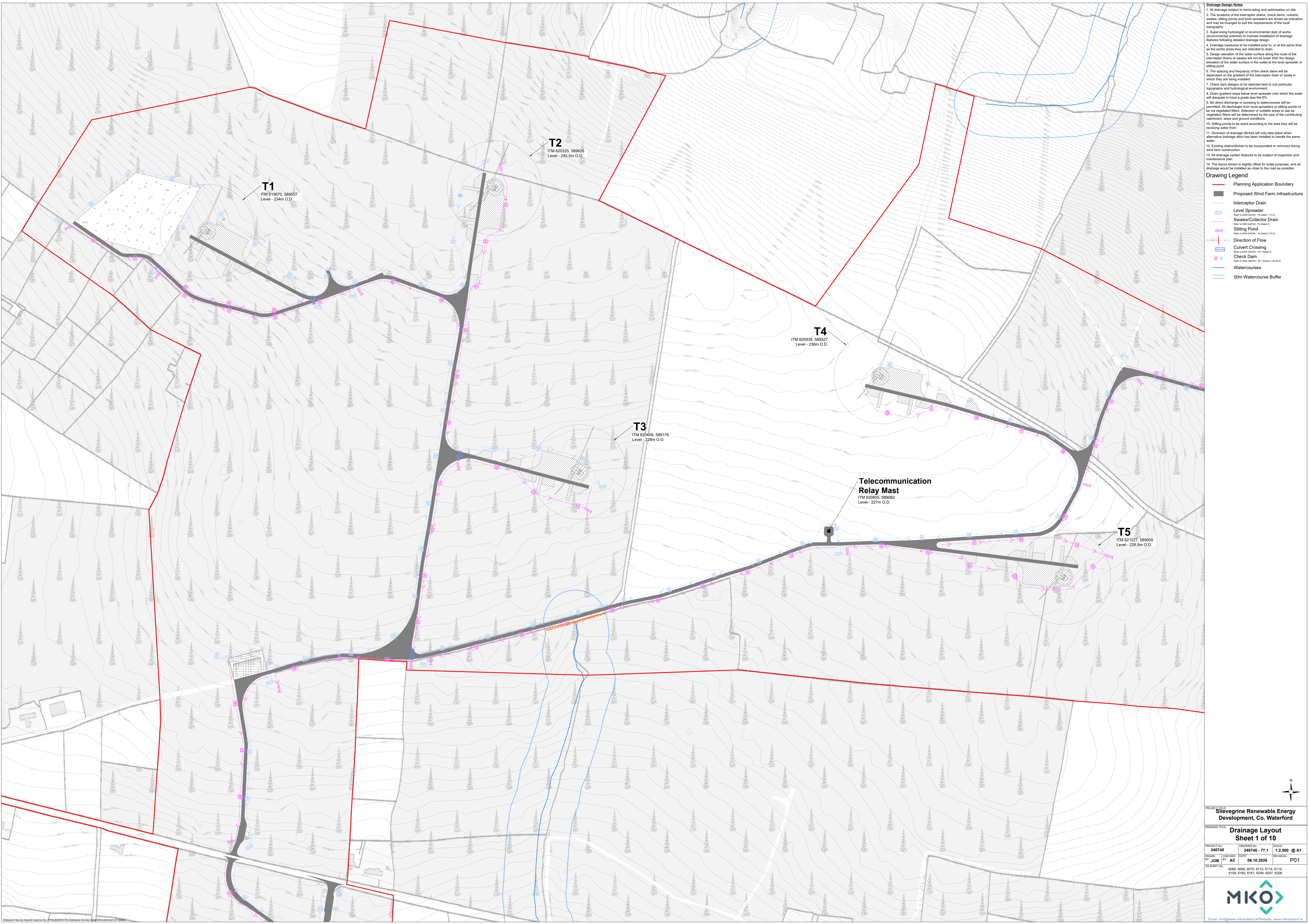
PROJECT TITLE: **Slievegrine Renewable Energy Development, Co. Waterford**

DRAWING TITLE: **Drainage Layout Key Plan**

PROJECT No:	240740	PROJECT No:	240740 - 77	SCALE:	1:15,000 @ A1
DRAWN BY:	AC	CHECKED BY:	AC	DATE:	06.10.2026
DESIGNER:	6068, 6069, 6070, 6113, 6114, 6115, 6159, 6160, 6161, 6205, 6207, 6208	REVISION:	P01		

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- Drainage Design Notes**
1. All drainage subject to micro-siting and optimisation on site.
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 5. Design elevation of the water surface along the route of the interceptor drains or swales will not be lower than the design elevation of the water surface in the outlet at the level spreader or stilling pond.
 6. The spacing and frequency of the check dams will be dependent on the gradient of the interceptor drain or swale in which they are being installed.
 7. Check dam designs to be selected best to suit particular topography and hydrological environment.
 8. Down gradient slope below level spreader onto which the water will dissipate to have a grade less than 6%.
 9. No direct discharge or pumping to watercourses will be permitted. All discharges from level spreaders or stilling ponds to be via vegetated filters. Selection of suitable areas to use as vegetated filters will be determined by the size of the contributing catchment, slope and ground conditions.
 10. Stilling ponds to be sized according to the area they will be receiving water from.
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- Drawing Legend**
- Planning Application Boundary
 - Proposed Wind Farm Infrastructure
 - Interceptor Drain
 - Level Spreader
 - Swales/Collector Drain
 - Stilling Pond
 - Direction of Flow
 - Culvert Crossing
 - Check Dam
 - Watercourses
 - 50m Watercourse Buffer

PROJECT TITLE: **Slievegrine Renewable Energy Development, Co. Waterford**

DRAWING TITLE: **Drainage Layout Sheet 1 of 10**

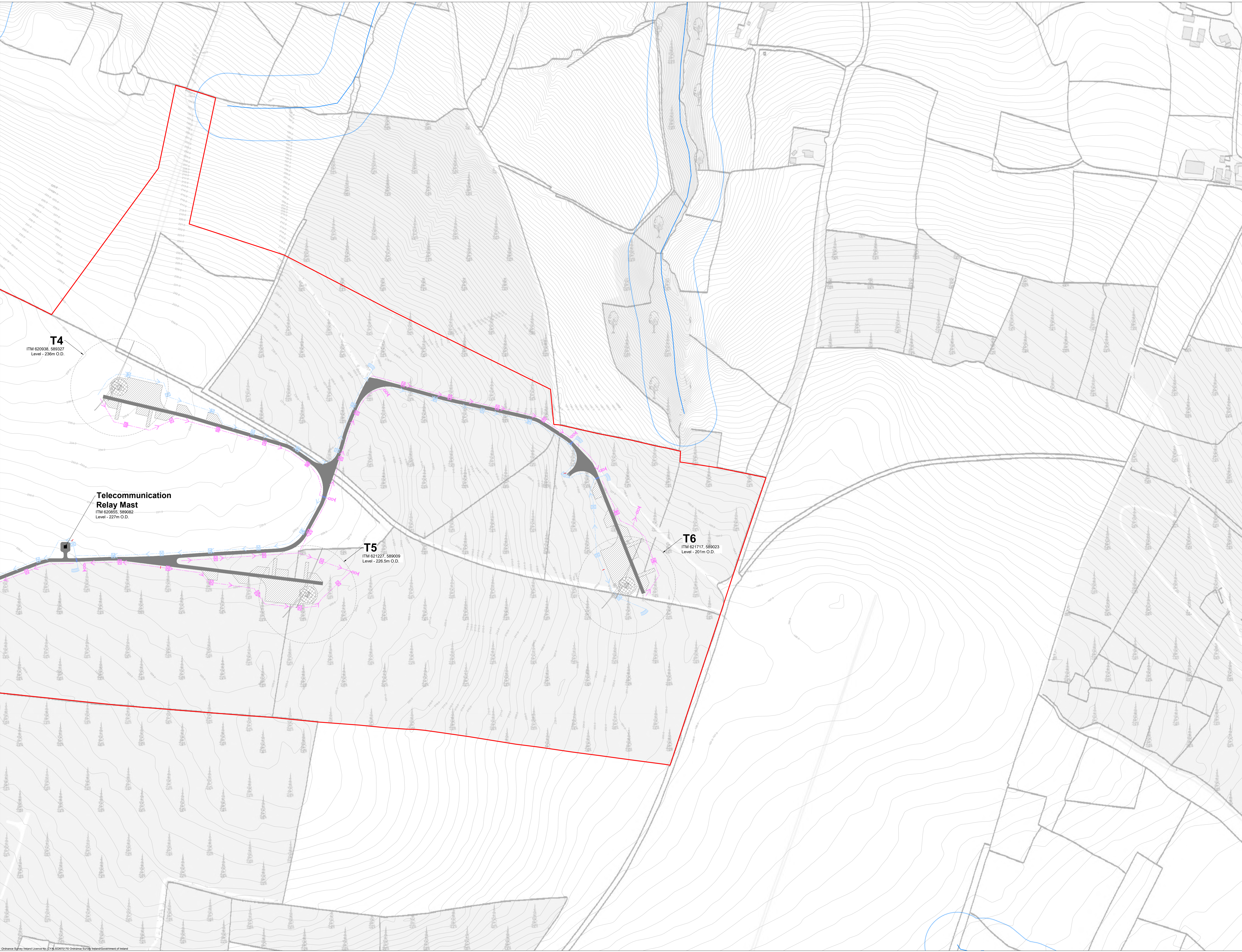
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240740	240740 - 77.1	1:2,500 @ A1

DRAWN BY:	CHECKED BY:	DATE:	REVISION:
JOB	AC	06.10.2026	P01

DESIGNER: 6068, 6069, 6070, 6113, 6114, 6115, 6159, 6160, 6161, 6206, 6207, 6208

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- Drawing Legend**
- Planning Application Boundary
 - Proposed Wind Farm Infrastructure
 - Interceptor Drain
 - Level Spreader
 - Swales/Collector Drain
 - Stilling Pond
 - Direction of Flow
 - Culvert Crossing
 - Check Dam
 - Watercourses
 - 50m Watercourse Buffer

PROJECT TITLE
Slievegrine Renewable Energy Development, Co. Waterford

DRAWING TITLE
Drainage Layout Sheet 2 of 10

PROJECT No.
240740

PROPOSED No.
240740 - 77.2

SCALE
1:2,500 @ A1

DRAWN BY
JOB

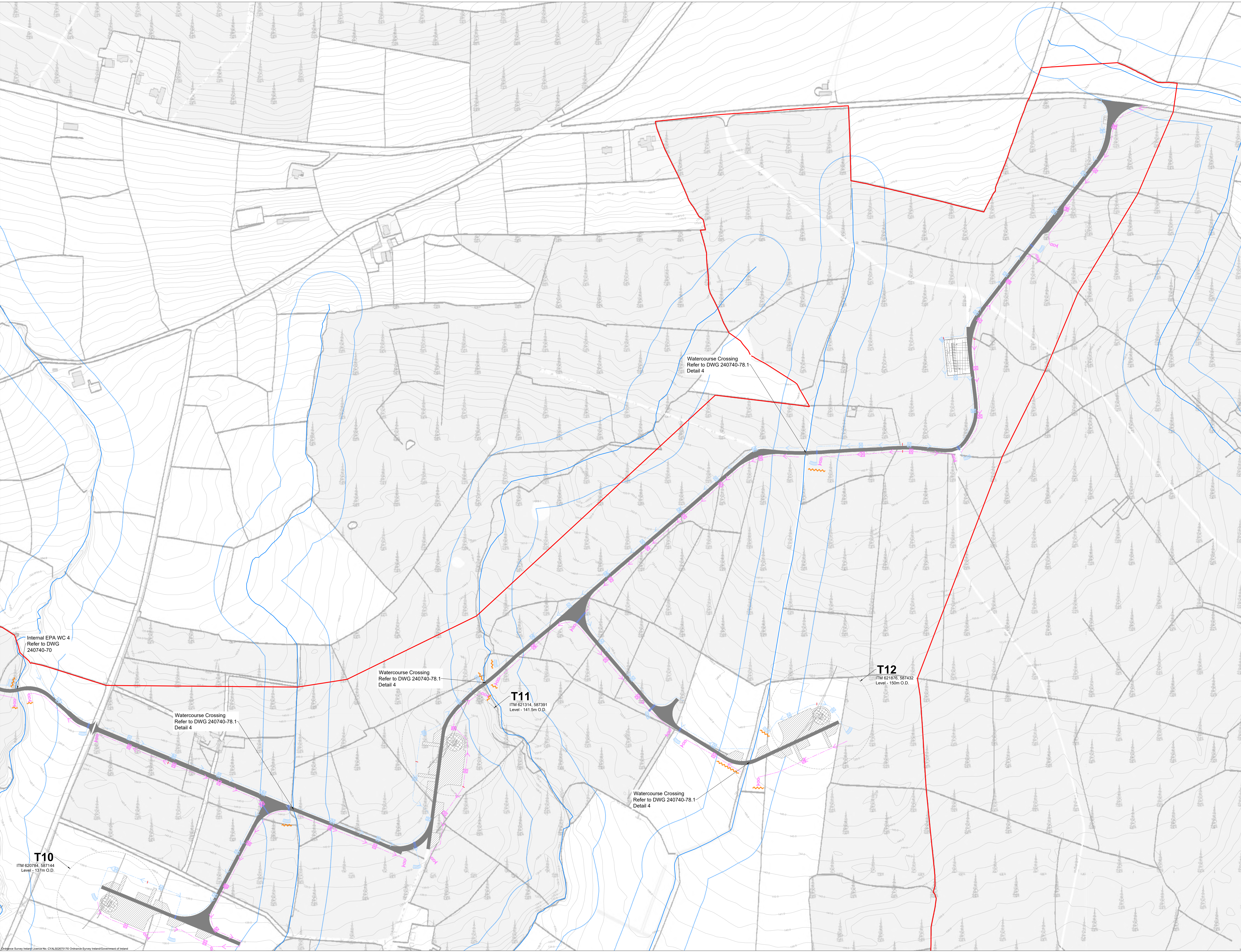
CHECKED BY
AC

DATE
06.10.2026

REVISION
P01

OS SHEET No.
6068, 6069, 6070, 6113, 6114, 6115, 6150, 6160, 6161, 6206, 6207, 6208


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Drainage Design Notes

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Drawing Legend

- Planning Application Boundary
- Proposed Wind Farm Infrastructure
- Interceptor Drain
- Level Spreader
- Swales/Collector Drain
- Stilling Pond
- Direction of Flow
- Culvert Crossing
- Check Dam
- Silt Fence
- Watercourses
- 50m Watercourse Buffer

PROJECT TITLE
Slievegrine Renewable Energy Development, Co. Waterford

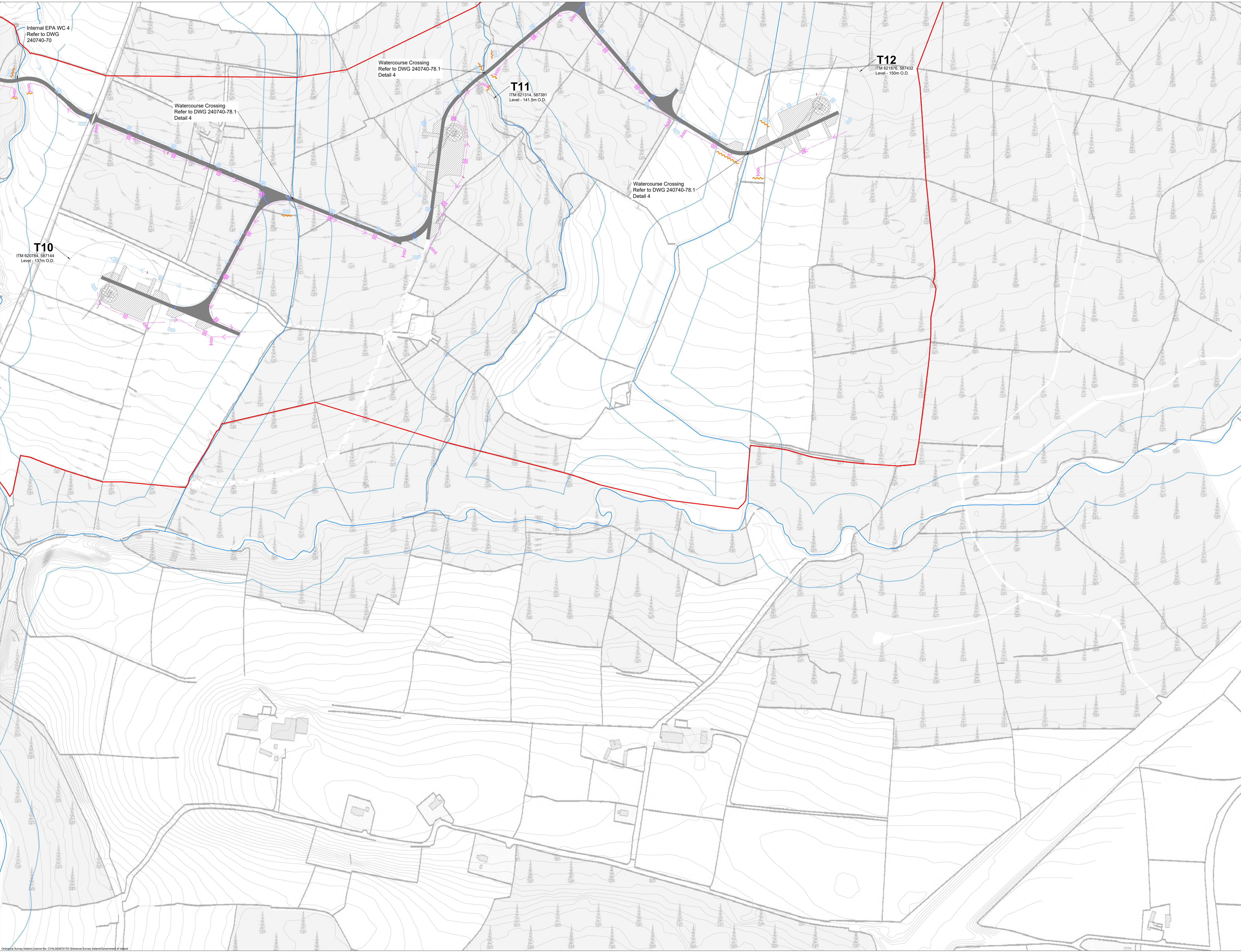
DRAWING TITLE
Drainage Layout
Sheet 3 of 10

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DRAWN BY	JOB	CHECKED BY	DATE	REVISION	
AC	AC		06.10.2026	P01	

DESIGNER: 6068, 6069, 6070, 6113, 6114, 6115, 6159, 6160, 6161, 6205, 6207, 6208

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Drawing Legend

- Planning Application Boundary
- Proposed Wind Farm Infrastructure
- Interceptor Drain
- Level Spreader
- Swales/Collector Drain
- Stilling Pond
- Direction of Flow
- Culvert Crossing
- Check Dam
- Silt Fence
- Watercourses
- 50m Watercourse Buffer

PROJECT TITLE
Slievegrine Renewable Energy Development, Co. Waterford

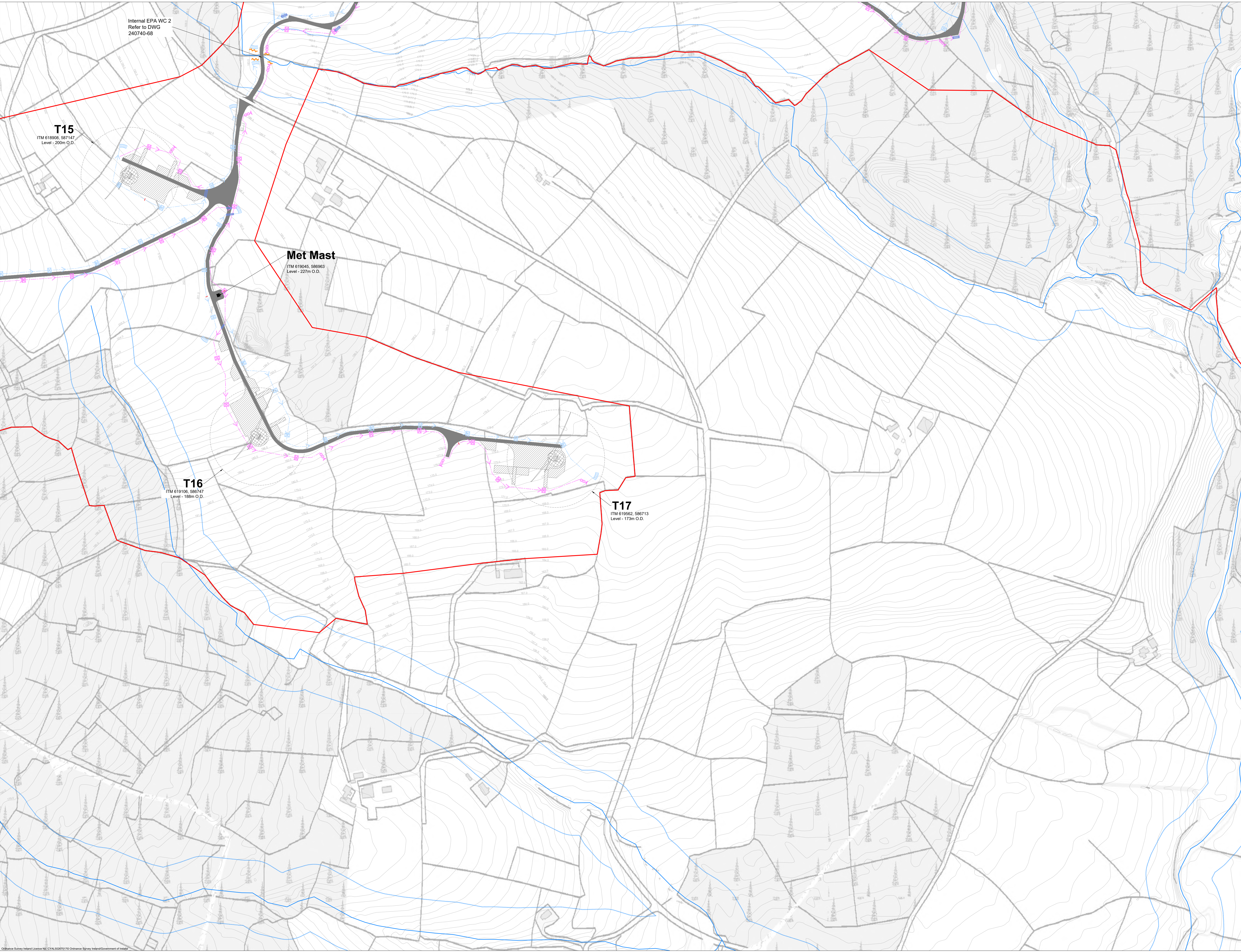
DRAWING TITLE
Drainage Layout Sheet 4 of 10

PROJECT No.	240740	PROPOSED No.	240740 - 77.4	SCALE	1:2,500 @ A1
DRAWN BY	JOB	CHECKED BY	AC	DATE	06.10.2026
DESIGNER		REVISION			P01

6068, 6069, 6070, 6113, 6114, 6115, 6159, 6160, 6161, 6206, 6207, 6208
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- Drainage Design Notes**
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- Drawing Legend**
- Planning Application Boundary
 - Proposed Wind Farm Infrastructure
 - Interceptor Drain
 - Level Spreader
 - Swales/Collector Drain
 - Stilling Pond
 - Direction of Flow
 - Culvert Crossing
 - Check Dam
 - Silt Fence
 - Watercourses
 - 50m Watercourse Buffer



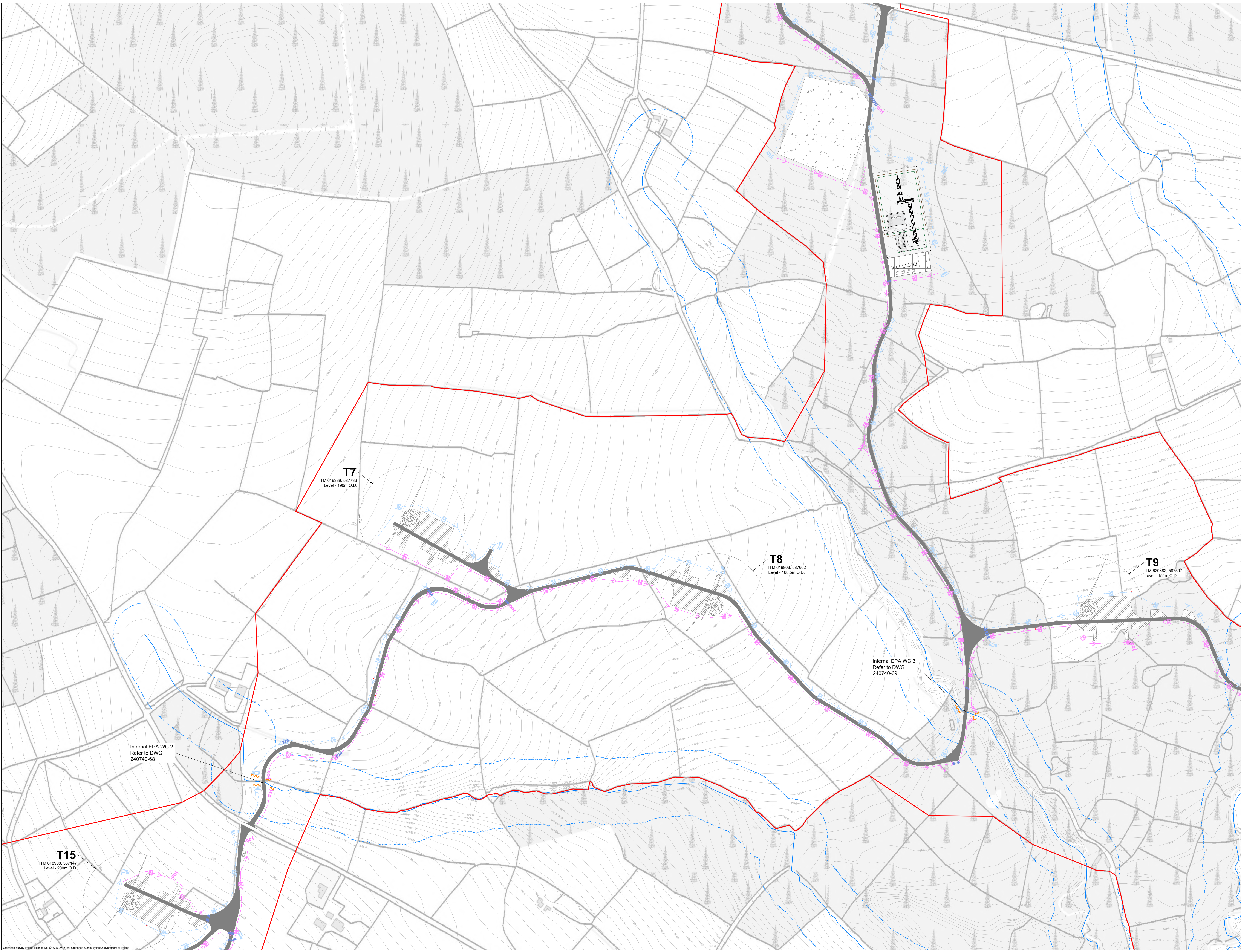
PROJECT TITLE: **Slievegrine Renewable Energy Development, Co. Waterford**

DRAWING TITLE: **Drainage Layout Sheet 5 of 10**

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DRAWN BY:	JAC	CHECKED BY:	AC	DATE:	06.10.2026
DESIGNER:	6068, 6069, 6070, 6113, 6114, 6115, 6159, 6160, 6161, 6206, 6207, 6208	REVISION:	P01		

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Drainage Design Notes

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Drawing Legend

- Planning Application Boundary
- Proposed Wind Farm Infrastructure
- Interceptor Drain
- Level Spreader
- Swales/Collector Drain
- Stilling Pond
- Direction of Flow
- Culvert Crossing
- Check Dam
- Silt Fence
- Watercourses
- 50m Watercourse Buffer

PROJECT TITLE
Slievegrine Renewable Energy Development, Co. Waterford

DRAWING TITLE
Drainage Layout Sheet 6 of 10

PROJECT No.	240740	PROPOSED No.	240740 - 77.6	SCALE	1:2,500 @ A1
DRAWN BY	JOB	CHECKED BY	DATE	REVISION:	
0608	0609	6070	6113	6114	6115
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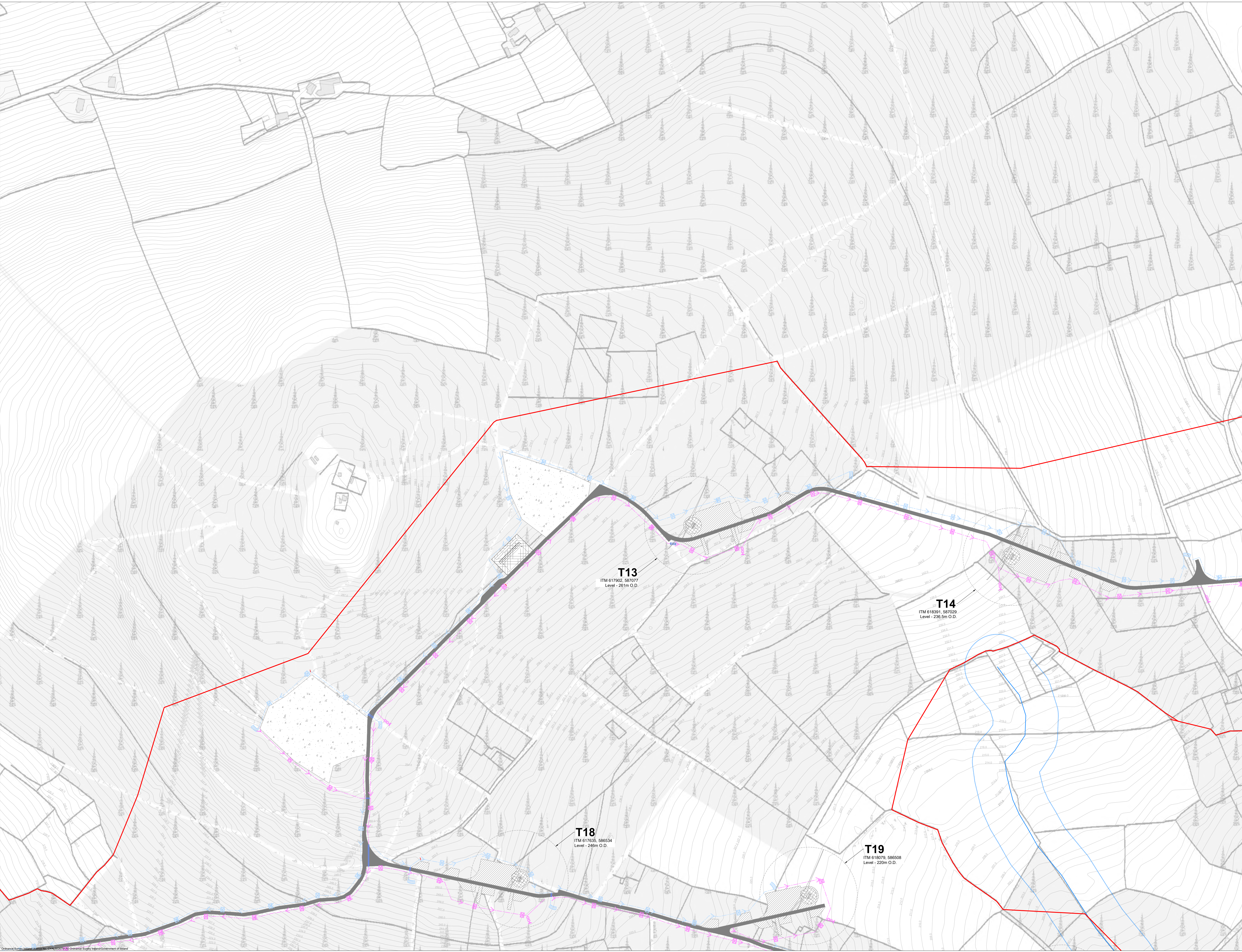
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Scale

North Arrow

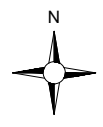
Logo

Website



- Drainage Design Notes**
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- Drawing Legend**
- Planning Application Boundary
 - Proposed Wind Farm Infrastructure
 - Interceptor Drain
 - Level Spreader
 - Swales/Collector Drain
 - Stilling Pond
 - Direction of Flow
 - Culvert Crossing
 - Check Dam
 - Watercourses
 - 50m Watercourse Buffer



PROJECT TITLE
Slievegrine Renewable Energy Development, Co. Waterford

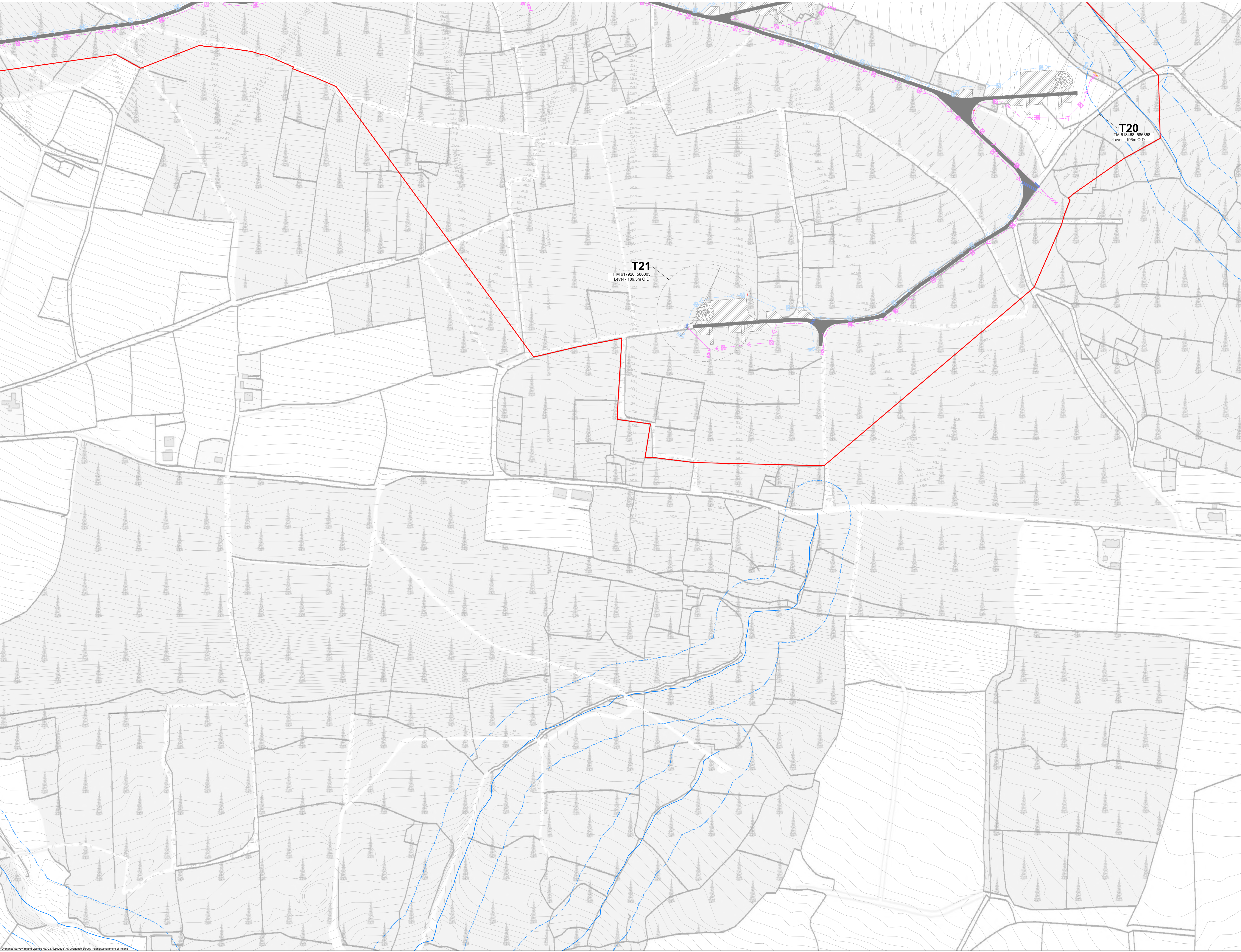
DRAWING TITLE
Drainage Layout Sheet 7 of 10

PROJECT No.	240740	DRAWING No.	240740 - 77.7	SCALE	1:2,500 @ A1
DRAWN BY	JOB	CHECKED BY	DATE	REVISION	
AC	AC		06.10.2026	P01	

DESIGNER No. 6068, 6069, 6070, 6113, 6114, 6115, 6159, 6160, 6161, 6206, 6207, 6208

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Drainage Design Notes

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Drawing Legend

- Planning Application Boundary
- Proposed Wind Farm Infrastructure
- Interceptor Drain
- Level Spreader
Refer to DMS 240740 - 77.8 (Detail 1 & 1.1.2)
- Swales/Collector Drain
Refer to DMS 240740 - 77.8 (Detail 2)
- Stilling Pond
Refer to DMS 240740 - 77.8 (Detail 3 & 1.1.2)
- Direction of Flow
- Culvert Crossing
Refer to DMS 240740 - 77.8 (Detail 4)
- Check Dam
Refer to DMS 240740 - 77.8 (Detail 5 & 1.1.2)
- Silt Fence
Refer to DMS 240740 - 77.8 (Detail 6 & 1.1.2)
- Watercourses
- 50m Watercourse Buffer

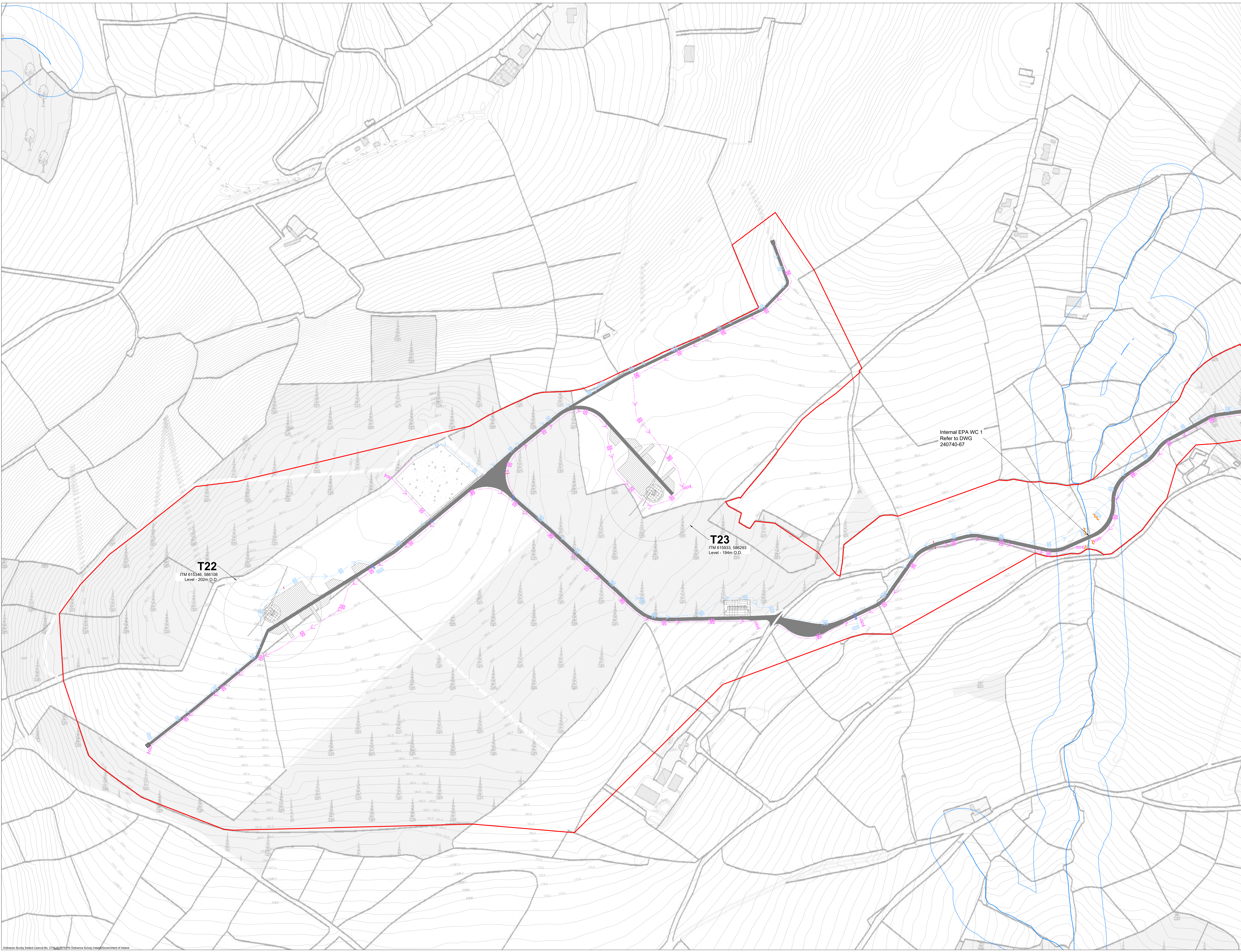
PROJECT TITLE
Slievegrine Renewable Energy Development, Co. Waterford

DRAWING TITLE
Drainage Layout Sheet 8 of 10

PROJECT No:	240740	PROPOSED No:	240740 - 77.8	SCALE:	1:2,500 @ A1
DRAWN BY:	JAC	CHECKED BY:	AC	DATE:	06.10.2026
DESIGNER:	6068, 6069, 6070, 6113, 6114, 6115, 6159, 6160, 6161, 6205, 6207, 6208	REVISION:	P01		

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- Drawing Legend**
- Planning Application Boundary
 - Proposed Wind Farm Infrastructure
 - Interceptor Drain
 - Level Spreader
 - Swales/Collector Drain
 - Stilling Pond
 - Direction of Flow
 - Culvert Crossing
 - Check Dam
 - Silt Fence
 - Watercourses
 - 50m Watercourse Buffer

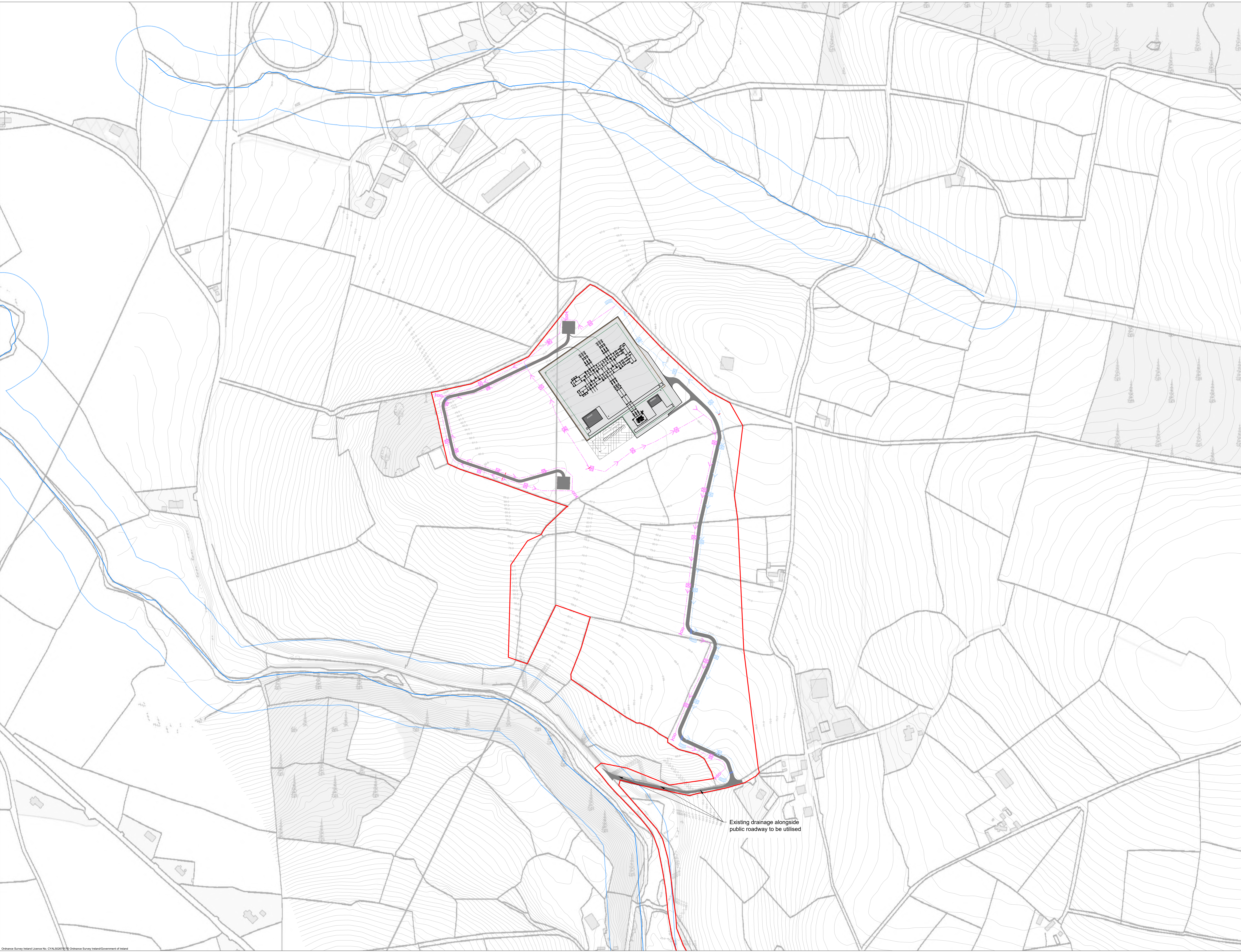
PROJECT TITLE: Slievegrine Renewable Energy Development, Co. Waterford

DRAWING TITLE: Drainage Layout Sheet 9 of 10

PROJECT No:	240740	PROPOSED No:	240740 - 77.9	SCALE:	1:2,500 @ A1
DRAWN BY:	JOB	CHECKED BY:	AC	DATE:	06.10.2026
DESIGNER:	6068, 6069, 6070, 6113, 6114, 6115, 6159, 6160, 6161, 6206, 6207, 6208	REVISION:	P01		

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Drainage Design Notes

1. All drainage subject to micro-siting and optimisation on site.
2. The locations of the interceptor drains, check dams, culverts, swales, stilling ponds and level spreaders are shown as indicative, and may be changed to suit the requirements of the local topography.
3. Supervising hydrologist or environmental clerk of works (environmental scientist) to oversee installation of drainage features following detailed drainage design.
4. Drainage measures to be installed prior to, or at the same time as the works areas they are intended to drain.
5. Design elevation of the water surface along the route of the interceptor drains or swales will not be lower than the design elevation of the water surface in the outlet at the level spreader or stilling pond.
6. The spacing and frequency of the check dams will be dependant on the gradient of the interceptor drain or swale in which they are being installed.
7. Check dam designs to be selected best to suit particular topography and hydrological environment.
8. Down gradient slope below level spreader onto which the water will dissipate to have a grade less the 0%.
9. No direct discharge or pumping to watercourses will be permitted. All discharges from level spreaders or stilling ponds to be via vegetated filters. Selection or suitable areas to use as vegetation filters will be determined by the size of the contributing catchment, slope and ground conditions.
10. Stilling ponds to be sized according to the area they will be receiving water from.
11. Diversion of drainage ditches will only take place when alternative drainage ditch has been installed to handle the same water.
12. Existing drains/ditches to be incorporated or removed during wind farm construction.
13. All drainage system features to be subject of inspection and maintenance plan.
14. The layout shown is slightly offset for scale purposes, and all drainage would be installed as close to the road as possible.

Drawing Legend

- Planning Application Boundary
- Proposed Wind Farm Infrastructure
- Interceptor Drain
- Level Spreader
- Swales/Collector Drain
- Stilling Pond
- Direction of Flow
- Culvert Crossing
- Check Dam
- Watercourses
- 50m Watercourse Buffer

PROJECIT TITLE
Slievegrine Renewable Energy Development, Co. Waterford

DRAWING TITLE
Drainage Layout Sheet 10 of 10

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