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Planning, Sustainable Development
and Landscape Consultants

PROPOSED WASTE WATER TREATMENT PLANT NEWPORT, CO. MAYO

LANDSCAPE AND VISUAL IMPACT ASSESSMENT

Contracting Organisation:

E G PETTIT & CO LTD
On behalf of
MAYO COUNTY COUNCIL

November 2004

Ref: 04-0614B

1. Methodology

This assessment is based on the guidelines laid out in the Environmental Protection Agency (EPA) publications: Guidelines on the Information to be Contained in an Environmental Impact Statement' (March 2002) and the accompanying Advice Notes on Current Practice (September 2003).

This assessment has been carried out by Tíros Resources Limited: Planning, Sustainable Development and Landscape Consultants in consultation with EG Pettit & Company Limited.

In undertaking this assessment, Tíros Resources Limited has carried out a desk study of the Mayo County Development Plan 2003-2009 and available Ordnance Survey mapping to establish local landscape character, landscape planning context and the likely visual envelope of the proposed development. A meeting with Mayo County Council's Planning Department was also held specifically to discuss the scope for the landscape and visual impact study, identifying potentially sensitive vantage points and the type of mitigation measures that might be employed as part of the proposed development.

A comprehensive field study was subsequently undertaken over a period of two days, where the sites for each component of the proposed development were visited, photographed and assessed for the likely extent of the visual envelope. During the field study, factors influencing the subtleties of the visual envelope were established, including variations in topography, the complexity of the urban fabric of Newport town, and the nature and extent of vegetation surrounding the sites and within the broader landscape. All potential public vantage points were thoroughly explored and views towards the proposed development sites photographed where appropriate.

Weather conditions during this time were good, with calm, clear and bright conditions prevailing.

Landscape in the Existing Environment

The EPA Advice Notes describe landscape as a combination of two separate but closely related aspects. The first is the extent to which new developments can be seen; the second is impacts on the character of the landscape and the responses that are felt towards the combined effects of the new development

The assessment also follows the recommended course of addressing context, character, significance and sensitivity. These are terms defined in the EPA Advice Notes as follows:

Context: Areas from which the existing site can be seen are generally noted, with particular attention given to views from designated tourism routes and view points; roads; residences, hotels and amenities; and monuments and archaeological sites. Areas from beyond the site boundary from which the site can be seen should be noted. Principal landscape features and areas of distinctive character should be mapped.

Character: Landscape character comprises both natural and cultural elements. A description of the landscape character differentiates between subjective assessments and objective description. A description of the character of the site as perceived within both the site and wider landscape is important, as is a description of the intensity and character of land use.

Significance: This entails the level of visual intrusion upon or obstruction of designated views, designated landscapes and designated landscape amenity areas.

Sensitivity: The extent to which the existing landscape or views are capable of being changed in such a way as not to alter the perceived character and appearance.

Impacts on Landscape

This includes an assessment of the "do nothing" approach alongside the predicted impacts of changes in character, visibility and land use patterns. The predicted impacts refer to indirect, secondary and cumulative impacts.

Mitigating Impacts on Landscape

The principles of mitigating impacts on the landscape are as follows:

- Avoid developments in sensitive or prominent landscapes.
- Avoid insensitive or visually intrusive designs.
- Reduce the visual intrusiveness of the design.
- Reduce the visibility of the project.

Definition of Visual Impacts

The following terminology has been used in the visual assessment and is defined as follows:

- Visual Intrusion: This occurs where a proposed development impinges on an existing view without obscuring the view.
- Visual Obstruction: This occurs where a proposed development obscures an existing view.

Degree (Significance) of Visual Impact

- None: There will be no change to an existing view.
- Imperceptible: An impact capable of measurement but without noticeable consequences.
- Slight: An impact that causes a noticeable change in the environment without affecting its sensitivities.
- Moderate: An impact that significantly alters an aspect of the environment but in a manner that is consistent with existing character and trends.
- Significant: An impact that, through magnitude, duration or intensity, alters a sensitive aspect of the environment.
- Profound: An impact that alters a sensitive aspect of the existing environment so as to dramatically change or obliterate it.

Visual Impacts may be Neutral, Positive or Negative:

- Neutral: This will neither enhance nor detract from the landscape character or viewpoint.
- Positive: This will improve or enhance the landscape character or viewpoint.
- Negative: This will have an adverse effect on the existing landscape character or viewpoint.

The duration of impacts is defined as:

- Temporary: One year or less.
- Short-term: One to seven years.
- Medium-term: Seven to fifteen years
- Long-term: Fifteen to sixty years
- Permanent: Over sixty years

2. *Development Proposals*

The site is located on the north-western outskirts of Newport, overlooking the Newport Channel. The Waste Water Treatment Plant (WWTP) and associated Pumping Stations form part of the wider proposals for the Newport Sewerage Scheme. These elements, together with the proposed marine outfall pipeline have the potential for impacting upon the landscape and visual amenity of the area and are therefore the subject of this assessment.

Waste Water Treatment Plant (WWTP)

It is proposed that the WWTP be located on the northern side of the Caulicaun peninsula close to the north-western fringes of Newport town (refer to Photographs 1 and 2). An indicative layout has been prepared and is illustrated on EG Pettit Drawing No. B6741-N023. This part of the development is likely to comprise a number of buildings and structures, namely a preliminary treatment plant, aeration and settlement tanks, flow balancing tanks, picket fence thickener, sludge dewatering building, effluent pumping and disinfection plant and a control building. The WWTP is likely to be enclosed by a 2.4 metre high palisade security fence, set within the existing vegetated site boundaries.

The WWTP structures are likely to range in height up to a maximum of 6.5 metres high. As the site is sloping, the layout of the WWTP is likely to take advantage of this in order to maximise use of gravity-fed circulation (instead of pumping). Where possible, taller structures will be located on the lower slopes.

A new Access Road from Quay Road will service the WWTP, following the route of the existing track (refer to Photographs 3 and 4). The road is likely to be a minimum of 4.0 metres wide, increasing to 6.0 metres wide to allow for passing points.

The construction period for the Waste Water Treatment Plant and Access Road is likely to be approximately eighteen months, although this and any

phasing of the works are likely to be determined by the appointed contractor. A broad range of plant equipment is likely to be used during construction, including bulldozers, Volvo A25s, low-loaders, excavators, HGVs and concrete lorries. Construction staff cars will also be parked in this location. Any surplus excavated material generated on site will be either incorporated into the landscape works or removed from site with any waste material.

During the subsequent operation of the Waste Water Treatment Plant, there is likely to be one operator vehicle accessing the site each day, plus one visit per week each from a sludge-removal tanker/lorry and delivery truck. Other vehicles may visit the site on an infrequent basis for maintenance purposes.

Waste Water Collection System (WWCS)

Two Pumping Stations will be located south of here, one to each side of the entrance to Newport Harbour. One will be located at the western end of Quay Road in a small clearing amongst the existing woodland/scrub vegetation (refer to Photograph 5). This structure is likely to comprise a two-room single storey building. The second Pumping Station will be located in the vicinity of the new apartments adjoining Newport Harbour's south quay (refer to Photographs 6 and 7). This structure is likely to comprise an underground pumping chamber with a small above-ground control kiosk .

The remainder of the Waste Water Collection System (WWCS) will comprise a network of sewers and rising mains, indicated as Options A to H on EG Pettit & Co. Drawing No. B6741-NO16, and connected into the Pumping Stations. Small control kiosks may be installed in a limited number of locations.

The construction of this WWCS pipeline network is likely to be constructed in phases and sequences determined by the appointed contractor. Plant employed during the construction is likely to comprise excavators, dumpers, 4-6 axle trucks, vibrators and vans. The depth of excavation is likely to vary between 1.5 metres and 3.4 metres, depending on topography, and approximately 1.0 metre wide, utilising the available road-space as the working area. Surplus excavated material will be removed from site for recovery, recycling or disposal. All excavated trenches will be reinstated to tie in with the existing road surface.

Marine Outfall

The Marine Outfall pipeline will run from the WWTP in a westerly direction through Lisduff and along the road to Rosmore, where it will turn north and discharge into Newport Bay at a point below the Lowest Astronomical Tide. The pipeline is likely to run underground for its entire length, with the exception of a short section crossing the channel at Lisduff that is likely to be installed at or close to the channel bed.

The construction period, phasing and sequence for the Marine Outfall pipeline is likely to be determined by the appointed contractor, although this would typically occupy a four month period. The pipeline is likely to be laid at a depth of 1.5 to 2.0 metres in a trench 1.0 metre wide, requiring a working width of up to 10.0 metres. Construction plant are likely to be the same as for

the Waste Water Collection System, but also include boats/barges for water-borne activities. Again, surplus excavated material and waste material will be removed from site for recovery, recycling and or disposal.

During the construction of the entire WWCS, WWTP and Marine Outfall, it is likely that the site for the WWTP will serve as the contractor's compound.

Within the text that follows, the term "proposed development" is used to refer to the project as a whole or in general, while specific parts of the project are referred to as above, namely: the "Waste Water Treatment Plant" or "WWTP"; the "Access Road" to the WWTP; the "Waste Water Collection System" or "WWCS", which includes the "Pumping Stations" and sewer network; and the "Marine Outfall" pipeline.

3. *Site Location, Context and Visibility*

The landscape of the area is characterised by the distinctly undulating topography of the drumlins that occur extensively in this part of County Mayo. The drumlins continue into Newport Bay and the wider Clew Bay to produce an extensive network of islands that characterise the sea views from here.

The landscape generally surrounding Newport is predominantly rural, a character that is reflected in the scale and nature of Newport town itself. Agriculture depends on mainly grazing land, comprised of both improved and unimproved pasture. Ground conditions are frequently wet, which is reflected in the local vegetation – fields frequented by rushes and scrubby hedgerows dominated by goat willow. Field boundaries comprise mostly stone walls, while earth banks and hedgerows occur along some of the roads. Scrubby woodland occurs frequently, particularly on some of the steeper slopes of the drumlins and shorelines. Coniferous trees are not uncommon, mostly spruce, where they have been planted around farm buildings or in small plantations.

Outside of Newport town, settlement occurs at frequent intervals along the local road network, mostly in small clusters

Waste Water Treatment Plant (WWTP)

The site of Waste Water Treatment Plant is an elevated and gently sloping field on the northern side of the Caulicaun peninsula (refer to Photographs 1 and 2). The southern and western field boundaries are comprised of substantial scrubby hedgerows (willow and thorn), while the northern boundary comprises a substantial area of scrubby woodland (including ash and maple). The southern boundary forms a secondary ridgeline in views from the south (Quay Road, Photograph 1). To the east there is further willow and thorn scrub where the ground rises up to and beyond a footpath, also overgrown. The existing footpath (refer to Photographs 3 and 4) will be widened and surfaced to provide access to the WWTP.

While potentially a prominent location, field observation indicates that this is a very well screened location. This part of the peninsula is low-lying, reaching a peak of only 12 metres OD. The WWTP site has been located on the

northern side of the peninsula so that topography and vegetation screen views from the south and from the western side of Newport town (refer to Photograph 1). Further screening is afforded by rising ground to the east of the WWTP site, precluding views of it from high ground around St. Patrick's Church at the centre of Newport (refer to Photographs 9 and 10). Principal views of the site only occur from the northwest - from Lisduff and the road to Rosmore (refer to Photographs 11 and 12). These are not considered significant public vantage points.

Waste Water Collection System (WWCS)

The Pumping Station sites lie on either side of the entrance to Newport Harbour. The northern-most of these will be located at the western tip of Quay Road (refer to Photograph 5) overlooking the Newport Channel (refer to Photograph 1). This is a relatively prominent location, as the Quay Road is frequented by walkers and offers excellent views of the Newport Channel. It is not overlooked as such, but will be clearly visible adjacent to the Quay Road. The second Pumping Station site lies adjacent to new apartments and quay on the southern side of the harbour. While not as prominent as the first location, there are open views from the Quay Road and the nearby apartments (refer to Photographs 6 and 7), plus a distant view from the N59 (refer to Photograph 8).

The remainder of the WWCS will be installed within the street network of Newport town. The urban setting affords mainly localised views of relatively short sections of the network route, which will be affected only during construction.

Marine Outfall

The proposed route of the marine outfall pipeline passes from the WWTP down the northern side of the Caulicaun peninsula and crosses the channel at Lisduff, then follows the northern side of the channel to joins the road to Rosmore near the Lisduff bridge (refer to Photographs 1, 13 and 14). The route itself is screened in the view from Quay Road (refer to Photograph 1) except where it crosses the channel near Lisduff; the route is mainly visible from Lisduff (Photographs 11 and 12) and from the Rosmore Road itself (refer to Photographs 15 and 16). There are no views of this route from other directions.

4. Planning context

Mayo County Council has commissioned and published a Landscape Character Assessment for the whole county as part of its Development Plan 2003-2009. This publication has been used to ascertain the relevant planning context in relation to landscape and visual amenity matters, as set out in the following. An assessment of the proposed development in the context of the following planning policies is provided subsequently in Sections titled "Likely Landscape and Visual Impacts".

Landscape Character Areas

The site falls into Landscape Character Area J: Clew Bay Glacial Drumlins. Here, views to the north are dominated by the mountainous Beg Range and to the south by Croagh Patrick. There are generally open views out to the sea and inland towards Castlebar. Land cover is predominantly poor pasture and transitional woodland scrub. There is a significant zone of continuous urban fabric within this Character Area, identified as Westport; Newport is not described as such, although it is a significant town in a county context, within which the proposed development will largely occur.

This designation identifies a number of critical landscape factors that require consideration when preparing and analysing development proposals for this area. In particular there are distinct and unmistakable coastal vistas, particularly from elevated sections of the N59 and R335, which should be preserved; however, such views do not occur in the vicinity of the proposed development site.

In Landscape Character Area J, the complex undulating topography can comfortably accommodate appropriately sited development and assimilate it into the landscape. The undulating topography can shelter and absorb development, giving it realistic scale and visual containment. However, the topography also gives rise to a series of prominent primary and secondary ridge lines – development should avoid interrupting primary ridge lines in particular.

The shelter, visual containment and scale afforded by the drumlin topography is further enhanced by extensive vegetation cover – hedgerows and scrubby woodland.

Visually Vulnerable Areas

The proposed development site falls within an area designated as 'Vulnerable' in the Landscape Character Assessment on two counts – under the general designation of the entire Mayo coastline and also in particular under 'Promontories and Headlands – the Clew Bay drumlins'.

The policies regarding Vulnerable Areas require the protection of those principal features that give character and distinctiveness to the local landscape. Development must not impinge in any significant way on landscape character, integrity or uniformity. Particular regard should be had for views from Scenic Routes and the environs of archaeological and historical sites.

The proposed development site might also be included within the designation of 'Sensitive Areas' under the categories of 'transitional woodland scrub' and/or 'agricultural lands with significant natural vegetation'. The northern slopes of the Caulicaun peninsula support extensive natural or semi-natural vegetation cover.

Scenic Routes

As referred to above, regard must be had for Scenic routes, of which there are few in the locality. The nearest is that of the N59, although this designation does not apply to the section of the N59 from Rosturk, more than 8km to the west of Newport, to beyond Westport. In any case, the majority of the proposed development site cannot be seen from the N59 at any point because of intervening topography and/or vegetation. All works along the N59 itself and adjoining roads comprise underground works.

Both a Scenic Route and Scenic Vistas are designated along the shores of Lough Furnace to the north of Newport and the N59. Both distance and intervening topography/vegetation preclude any views of the proposed development site from here.

Principal Landscape Policy Areas

The proposed development site falls into Principal Landscape Policy Area 2: Lowland Coastal Zone. The policies applying to this area reiterate much of what is outlined above and are summarised below. Individual Policies are often relevant to more than one Policy Area – only those relevant to Policy Area 2 are listed below:

Policy 3: encourage development that will not have a disproportionate effect on the coastal environment in terms of location, design and visual prominence. Policy 11 applies that same principle to the landscape in general.

Policy 4: consider development that does not significantly interfere or detract from scenic coastal vistas when viewed from the public realm.

Policy 5: encourage development that will not interrupt or penetrate distinct linear sections of primary ridge lines and coast lines when viewed from the public realm.

Policy 6: preserve areas that are not subject to recent or previous development and have retained a dominantly undisturbed coastal character.

Policy 7: Development on steep slopes should avoid a disproportionate or dominating visual impact

Policy 8: Recognise areas of substantial residential and rural land use and the pressures arising from demand for housing, wind energy and industry.

Policy 9: Facilitate appropriate development in a progressive and clustered manner, respecting the scale and sensitivity of the landscape.

Policy 10: Recognise the potential impacts of tall and bulky development in a low-lying landscape.

Landscape Sensitivity Index

A Landscape Sensitivity Index is included in Mayo's Landscape Character Assessment, where different types of development are assessed for likely impacts within each of the Landscape Policy Areas. This index is intended to provide guidance and support the decision-making process.

The development under consideration here falls most appropriately into the category of "Industrial/Commercial development". The Landscape Sensitivity Index suggests that this type of development in the 'Lowland Coastal Zone' Landscape Policy Area has a low potential for creating adverse impacts. Development will be normal and appropriate unless it is badly sited and/or designed.

5. Sources of Potential Landscape and Visual Impacts

Landscape and visual impacts can arise from the development in a number of ways, in particular:

- Removal of landscape features (temporary or permanent)
- Construction impacts (short term)
- Operational impacts (medium or long term)
- Lighting

Removal of landscape features

Nearly all development projects require an element of site clearance prior to or during construction. It is anticipated that it will be necessary to remove existing walls and vegetation along parts of the proposed Access Road to the Waste Water Treatment Plant, both as a short term measure to accommodate construction traffic, and for the long-term accommodation of maintenance vehicles. Scrub will be cleared from the eastern side of the WWTP site, adjacent to the proposed Access Road and it is also likely that some scrub will be removed from the northern margins of the site.

It may also be necessary to remove earth banks and hedges along parts of the Marine Outfall pipeline route to accommodate construction works.

However, it is intended to retain vegetation in most cases. The WWTP is surrounded by mature scrub and young woodland vegetation, which provide significant screening to the site. Vegetation adjacent to the proposed Pumping Station on Quay Road will be retained except where removal is required to achieve a minimum working area around the proposed building.

Within the town where the sewer network is to be installed, there is no vegetation that will require removal to accommodate the works. Care will need to be taken in the detailed pipeline routing to minimise potential impacts of excavation works on the roots of existing trees, particularly along Quay Road and the road near Teevmore/Milcum.