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WEL Networks Limited
WEL Wind Park –
Te Hauhiko O Wharauroa
Regional Resource Consent Application

14 July 2007
Reference 444D63

Application for Resource Consent Under Section 88 of the Resource Management Act 1991

To: Environment Waikato

WEL Networks Limited (WEL) applies for the resource consent described below:

1. The names and addresses of the owners and occupiers of land to which the application relates are as follows:

Owner	*Legal Description*	*Title Area*	*Turbines*	*Other*
JE & MJC Vanhoutte, DM Taylor, Tomkins Wake Trustees Ltd	Sec 5 Blk XI Karioi SD (SO 12238)	310.15ha	T11, T12, T13, T14, T27	Internal Road, Pot. Soil Disposal Site, Pot. Borrow Area
"	Sec 2 Blk XI Karioi SD (SO 8540)	213.67ha	T3, T5, T6, T7, T8, T9, T10, T23, T25, T26	Internal Road, Pot. Soil Disposal Sites, Meteorological masts
"	Pt Sec 1 Blk VII Karioi SD (SO 12305)	368.92ha	T16, T17, T18, T19, T20, T21	Internal Road, Pot. Soil Disposal Site
"	Sec 6 Blk XI Karioi SD (SA34A/992)	50.58ha		
JA & MF Greenwood	Allot 134 Whaingaroa Parish (SO 14724)	158.43ha	½ of T28	Internal Road
"	Allot 114 Whaingaroa Parish (SO 14724)	91.22ha	T29	Internal Road
TAH Jowsey	Sec 23 Blk X Karioi SD (SO 37272) CT 50B/369	105.77ha		Access Road
"	Sec 12 Blk XI Karioi SD (SO 37272)	265.06ha	T1 & T2	Access Road, Internal Road, Work & Storage Compound, Pot. Soil Disposal Site, Proposed Hardstand and crushing area
"	Sec 13 Blk XI Karioi SD (SO 37272)	111.04ha	T4	Access Road, Internal Road, Pot. Borrow Area
"	Lot 5 DPS 90684 CT 71B/348	94.24 ha		Access Road
"	Lot 4 DPS 90684 CT 71B/349	4.98 ha		Access Road, Concrete Batching Plant
ZT & RJ Jowsey	Lot 3 DPS 90684 (SA71B/350)	1.02 ha		Quarry Entrance
TA Clifford	Lot 3 DP 309860	638.06ha	T15, T24 and ½ of T28	Internal Road, Pot. Soil Disposal Site, Pot. Borrow Area
AG & DF Buchanan	Sec 26 Blk X Karioi SD CT 32B/741	406.68ha		Access Road
"	Sec 19 Blk X Karioi SD (SA32B/741)	1.05ha		Minor public road realignment (Minor shape corrections to Plateau Road may encroach onto this land)

GB & PC Bull	Sec 22 Blk X Karioi SD CT 49C/537	72.93ha		Minor public road realignment (Minor shape corrections to Plateau Road may encroach onto this land)

Note: The Te Mata Quarry is located on Lot 2 DPS 90684. The extension of the quarry within this lot to supply construction materials is the subject of separate consents.

Anecdotal
Certificates of Title for the private land listed above are attached as Appendix K. WEL and the private landowners have entered into arrangements to use parts of the above land for wind farm purposes.

2. The general location to which this application relates is land on the Wharauroa plateau, 10km south-east of Raglan, being legally described above. The location is further described (including a location map) in section 2 of the WDC Resource Consent Application (see Part I).

3. The type of resource consents sought is

- land use consent for earthworks, within and outside of high-risk erosion areas,
- discharge permit for large scale disposal of overburden to ground, and
- water permits for stream and stormwater diversion.

4. In accordance with section 125 of the Resource Management Act 1991, the applicant seeks a term of ten years from commencement to give effect to the resource consents applied for.

5. A description of the activities to which the application relates is set out below. A more detailed description of those activities and an assessment of their effects on the environment is included in the AEE and annexures thereto.

(a) The erection, operation and maintenance of up to 28 wind turbines for the generation of electricity, in the general positions shown on drawings attached to the application.
(b) Erection and operation of an Operation and Maintenance Building.
(c) Installation of underground cables and other electrical infrastructure to connect the wind farm to the transmission system.
(d) Erection, operation and maintenance of up to 3 meteorological masts.
(e) Excavation and use of basecourse material.
(f) Operation of a mobile crushing plant
(g) Operation of a concrete batching plant (at the Te Mata Quarry).
(h) Land disturbance within the areas generally shown on the plans and in particular:
    (i) Access formation to turbine sites.
    (ii) Establishing flat platforms at each turbine site.
    (iii) Placement of fill.
    (iv) Establishing platforms for temporary laydown areas, an operation and maintenance building, and a substation.
    (v) Trenching and placement of cables.
(i) Maintenance and replacement of all works, equipment and facilities as required during the life of the wind farm.

6. The following additional consents are needed for the proposed activity:

Land Use consent from Waikato District Council for the erection and operation of the above activity.

7. The attached AEE and annexures thereto form part of this application and provide a description of any effects on the environment in accordance with the Fourth Schedule to the Resource Management Act 1991.

Address for service of applicant:
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Julian Elder
Chief Executive Officer
WEL Networks Limited
14 July 2007

Annexure: A description of the proposal for which the above resource consents are sought, an assessment of effects on the environment in accordance with the Fourth Schedule of the Act, and annexures thereto being part of and comprising detailed reports on matters referred to in the assessment of effects.

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Appendices

1. Introduction

1.1 Format of this report

This application is submitted in conjunction with the wind farm application submitted to the Waikato District Council. In order to avoid duplications between the district and regional resource consent applications, this report refers to the WDC application where relevant instead of replicating it. Affected are sections 1-7 of the WDC report, providing background information, the site description and general project information. Both reports share the same Appendices, with the civil and ecological assessments being of particular relevance to the regional consent application.

Consequently, please obtain the following information from the relevant WDC application as outlined below:

Project Proponent	-	*Chapter 1*
Executive Summary	-	*Chapter 2*
Background to the Development	-	*Chapter 3*
Site Description	-	*Chapter 4*
Physical Outcomes	-	*Chapter 5*
Consent Attributes	-	*Chapter 6*
Construction Outline	-	*Chapter 7*
Appendices	-	*as per table of contents*

1.2 The Proposal

WEL proposes to construct a wind farm on the Wharauroa Plateau, about four kilometres from State Highway 23 near Te Uku between Hamilton and Raglan, within the Waikato District. The completed wind farm will include:

- 28 wind turbines of up to 3 megawatts (MW) individual capacity, and up to 137 metres in height (base to vertically extended blade tip)
- Access roading from the Te Mata Quarry into the site, and between individual turbines to facilitate erection and ongoing maintenance
- An associated operations and maintenance building (which will be attached to the substation for wind farm output in the event of the subsequent designation being confirmed)
- Internal electricity reticulation cables from the wind turbines to a substation
- Up to three meteorological masts
- A public viewing platform at Te Uku (Permitted Activity).

With Environment Waikato being the regional authority, resource consent is required for the following activities:

- Earthworks
- Earthworks in a high-risk erosion area
- Large scale disposal of overburden to ground
- Stormwater diversion
- Stream diversion

The calculated project earthwork volumes amount to approximately 350,000 m^3 of cut material, 300,000 m^3 of engineered fill to be used in road/platform formation and approximately 30,000 m^3 residual fill for disposal. At least seven culverts would need to be installed to provide for the access road. Additional small culverts may be installed as required.

This application will be assessed against the Proposed Waikato Regional Plan. Due to the nature and scale of the proposed activity, the overall project is deemed a Discretionary Activity.

In addition, land use consent is required from the Waikato District Council for the erection, operation and maintenance of a wind farm, ancillary buildings and structures, including 28 wind turbines for the generation of electricity and up to three meteorological masts. The district and regional consent applications have been applied for simultaneously.

To monitor and ensure compliance with the Regional Plan, WEL proposes to develop and implement an Erosion and Sediment Control Plan (ESCP) in consultation with the Regional Council. The ESCP will cross-reference to best practice measures as outlined in EW's *Erosion & Sediment Control Guidelines for Soil Disturbing Activities*.

The ESCP will form part of an overall Environmental Management Plan (EMP). WEL will commit to the EMP as a means of ensuring that all phases of the wind farm construction and operation minimise the potential for adverse effects. The use of an EMP is proposed as a condition of the land use consent sought from the Waikato District Council.

2. Status of Activities

2.1 Earthworks

The proposed project requires large scale earthworks to form approximately 25km of access tracks, excavate up to 28 turbine foundations and prepare platforms adjacent to the proposed turbine locations and the Operation & Maintenance building site. Cut volumes are calculated to be approximately 350,000 m^3 and would affect an area of approximately 48 ha. Earthworks may also involve the quarrying of aggregates at some potential borrow areas, if material is found to be suitable. Some of the works, in particular roading earthworks, will take place in locations defined by the Regional Plan as high-risk erosion areas.

Under the Regional Plan soil disturbance, roading and tracking and vegetation clearance are generally a Permitted Activity (subject to conditions), unless the works take place in high-risk erosion areas. As a precautionary measure the applicant seeks resource consent for earthworks pursuant to PWRP Discretionary Activity Rule 5.1.4.13 for earthworks outside high-risk erosion areas where permitted activity rule requirements are exceeded.

Further, an area of approximately 3ha will be within a high-risk erosion area and would require resource consent for a Discretionary Activity under Rule 5.1.4.15. Please refer to Drawing SK22 that is enclosed to the Civil Engineering Report in Appendix D outlining the area affected by earthworks.

2.2 Culverts

The preliminary assessment of the area indicates that at least seven culverts will be required for the construction of the access road, ranging from 300 – 1,050mm diameter. The waterways that are to be culverted are tributaries of the Pakoka River and the Pakihi Stream. The catchments affected by the proposed culvert construction range from 1.96ha to 74.20ha. Under Rule 4.2.9.2, the erection of a culvert in the bed of a river for a catchment area not exceeding 100ha is a Permitted Activity subject to conditions. Consequently, no resource consent is required for the culverts associated with this project provided the relevant conditions are complied with.

2.3 Overburden disposal

The proposed activity requires the placement of approximately 300,000 m^3 of structural fill material and the disposal of approximately 30,000 m^3 of spoil material into designated overburden disposal areas. The Waikato Regional Plan permits overburden disposal outside of high-risk locations subject to conditions. However, due to the large quantities of overburden, resource consent is required under Rule 5.2.5.3 for Large Scale Overburden Disposal, which is a Discretionary Activity

2.4 Water take

The construction of earthworks and roading would require approximately 20,000 m^3 of water over a six-month period to assist with compaction of earthworks and pavement. While a water take consent has been applied for as part of the Te Mata Quarry extension resource consent application on 8 December 2006, additional water take may be required at other sites closer to the proposed turbine locations such as the Pakihi Stream. The necessity for additional water will be determined during the design stage after further geotechnical testing. However, it is anticipated that the additional water take, if any, will comply with the requirements of Rule 3.3.4.9 – Surface Water Takes, or 3.3.4.10 – Temporary

Takes under EW Proposed Variation No. 6 – Water Allocation. In both instances, any additional water take would be a Permitted Activity and would not require resource consent.

2.5 Stormwater diversion

The proposed activity requires the diversion of stormwater where earthworks are undertaken. The majority of this work is a Permitted Activity, however some elements of the proposal may exceed the permitted activity requirements. As a precautionary measure the applicant seeks resource consent for stormwater diversion pursuant to Discretionary Activity Rule 3.6.4.13 of the PWRP for the proposed gully filling adjacent to turbine sites or elsewhere on the site.

2.6 Stream diversion

The proposed gully fill site near chainage 5000m from Kawhia Road requires the existing stream to be diverted. Stream diversion is deemed a Discretionary Activity pursuant to Rule 3.6.4.13 of the PWRP.

3. Assessment of Environmental Effects

Section 104 of the Resource Management Act (1991) outlines the matters that a regulatory authority must consider when processing a resource consent application. These matters include an assessment of any actual or potential effects that the proposed activity will have on the environment, as well as any relevant policy statements and plans that exist and Part II of the Resource Management Act 1991.

3.1 Proposed earthworks

WEL Networks commissioned Bloxam Burnett & Olliver Ltd to undertake an assessment of the civil engineering requirements for the proposed WEL wind farm. The assessment covers civil works associated with the construction of the access road from the Te Mata Quarry to the Wharauroa Plateau, access to each turbine location, turbine foundations, turbine platforms, hydrology and hydraulics. The full civil engineering report is enclosed as Appendix D, which also includes indicative drawings of the proposed roading and other earthworks.

The project earthworks are related to access road formation, turbine foundation and platform construction, the excavation of soil and rock for use elsewhere on the site, the disposal of unusable soil and rock, and ancillary building construction.

Based on 2m contour data available at this stage, the earthwork volumes are in the order of 350,000 m^3 of cut material, 300,000 m^3 of structural fill and approximately 30,000 m^3 of spoil disposal. Earthworks will be undertaken at various locations within the project area at the same time. This will include the following four sections:

- Te Mata Quarry to Plateau Road (Jowsey property at Chainage 1700m)
- Plateau Road works from Chainage 1700m to 3200m (end of the current formed road).
- End of Plateau Road to the Plateau (Chainage 3200m to 6800m)
- Access roading on the Plateau. The access to each turbine will generally be formed in sequence after the central access route is constructed

An indicative roading cross section is provided on Drawing SK8 of the Civil Engineering Report, which provides typical examples for various locations along the proposed route. A number of the details such as batter slopes are subject to final design that is yet to be fully determined and will be assessed using geotechnical expertise. However, it is expected that design will be in general accordance with the information provided. The final design of the batter slopes will vary depending on soil materials on-site. The proposed methodology will allow for construction flexibility so that alterations to slope angles can be made on-site within design tolerances.

There are four areas along the route that require a significant amount of earthworks. They are as follows:

- Primary Road – Chainage 4400m to 4480m: Realignment of the existing track with cuts across a ridgeline up to 11m depth. The cut material will be used at the fill location from Chainage 4940m to 5040m. The works may require specific upslope stormwater cut off drains and benching.
- Primary Road – Chainage 4940m to 5040m: Realignment of the existing track. Drawing SK21 indicates the proposed method of controlling stormwater, sediment and buttress construction. The upper levels of the gully will be backfilled with unsuitable materials.
- Primary Road – Chainage 6300m to 6700m: Possible rock source for the mobile crushing plant. Depending on rock quality the road alignment will be straightened the excavated rock

material used as pavement. The likely quantity of rock material is in the order of 20,000-30,000 m^3.

- Secondary Road – Chainage 4300m to 4460m: Works involve a short steep section of roading (14% grade) with a 4-6m high fill embankment approaching the slope and then a 12m deep cutting at the crest of the hill side. The velocity of stormwater will be slowed down by ad using small dams at close centres. Rock material from this area will also be utilised for pavement construction if suitable.

It is noted that particular care has to be exercised for the proposed earthworks within high risk erosion areas. These areas are defined by EW where slopes exceed 25 degrees. As indicated in the Civil Engineering Assessment, approximately 3 ha of the primary access road from Plateau Road to the Plateau will fall into a high risk erosion area. Measures outlined in the Environmental Management Plan will ensure that earthworks within these areas will be carried out in accordance with the EW Erosion and Sediment Control Guidelines for Soil Disturbing Activities.

Once the initial earthworks for the forming of the access road is complete, further earthworks will continue to be undertaken to form the turbine access tracks, the turbine platforms and to excavate the turbine foundations. The engineering requirements for a suitable wind turbine foundation are calculated to be a concrete slab of no less than 18m x 18m with a thickness of no less than 2m. In addition, the turbine platform, which is needed to provide working space and a lay down area for the various turbine components prior to erection, will be approximately 50m x 50m with an unsealed metalled surface.

The internal electricity cables that connect the wind turbines with the substation will be laid underground by trenching along the road network to minimise earthwork effects. Trenching will be carried out before the application of pavement to the secondary roads.

The Operation and Maintenance (O&M) building is proposed to be constructed in proximity to Turbine number 14. The formation of the building platform will affect an area of approximately 465m^2. The total area affected by earthworks to form the parking and set down area, transformer yard and O&M building is approximately 1380 m^2. Please refer to Appendix L(1) for a schematic of the O&M building area.

3.2 Proposed overburden disposal

The Civil Engineering Assessment highlights a number of possible locations for disposal of unsuitable cut or undercut material (see Drawings 135250 SK1 to SK7 enclosed in Appendix D). Most of the anticipated cut material is expected to be suitable for structural fill, however there will be materials that are unsuitable, such as gully deposits or organics. The indicated disposal sites range from small depressions to larger gully heads. Please note that no soils will be disposed of in high risk erosion areas.

Minor fill volumes up to 2,000 m^3 can be disposed of in the smaller depressions. The selected locations are convenient, well spaced and will assist to minimise cartage. The recommended treatment of small disposal sites typically involves the scraping of topsoil, blading the fill into the depression, track rolling and finally the replacement of topsoil and re-grassing.

Larger disposal sites will require more detailed design considerations. These sites are typically located at the head of a gully and require the following preparations:

- Stormwater diversion via cut-off drains
- Underdrain subsoil pipes
- Sediment and silt control measures
- Disposal material to be layered

- Toe buttress boulders to support the fill
- Topsoiling and re-grassing
- Permanent surface stormwater drains

The larger disposal sites will be designed with geotechnical input to ensure the long term stability of the material.

3.3 Stormwater Control

A preliminary hydrological analysis has been undertaken for the subject catchment area as part of the Civil Engineering Assessment. The combined catchment area is very large (approximately 22,000 ha) and the resulting increased in run-off from the proposed road construction is considered to have little effect on the downstream systems. The hydrological analysis identifies a number of channels and minor streams that are affected by the proposed wind farm project. The calculation of stormwater volumes recommends suitable culvert diameters for the identified key crossings, ranging from 300mm to 1050mm.

Culvert headwalls and endwalls will be constructed using available on-site rock material. Side water channels will be used to control surface water from the road. The road will be sloped in one direction to minimise drainage controls and treatments. The road camber will generally slope to the inside or towards cut faces to intercept stormwater from cut slopes. It is expected that 300mm diameter pipes will be utilised at 100m centres in order to convey stormwater from the roadside channel to either sediment control devices or downstream systems.

A stormwater management plan, together with the stormwater design, will be submitted to EW prior to construction activities taking place. This will include flows, culvert size and location, overflow paths and contingency measures.

3.4 Sediment and Erosion Control

Silt, sediment and erosion control is considered to be a significant part of well-managed access road construction and platform works, in particular if earthworks are undertaken within high risk erosion areas. The Civil Engineering Assessment identified a number of separate small streams and waterway catchments that will be traversed by the proposed road alignment. It is proposed that all earthwork controls for the project will be in accordance with Environments Waikato's Erosion and Sediment Control Guidelines for Soil Disturbing Activities.

The overall construction philosophy of this project is to minimise the extent of the disturbance particularly in the proposed earthworks and soil disposal areas. The earthworks management plan and programme will ensure that the amount of exposed soils is minimised where possible. Particular attention will be given to areas where earthworks are undertaken in proximity to watercourses.

Due to the variable topography of the project site a multiplicity of measures will be utilised depending on the situation or location. Please refer to Drawings SK8, SK19-21 of the Civil Engineering Assessment for details of sediment control systems in locations such as platforms, roading, disposal sites and fill embankments. High risk erosion areas are outlined is Drawing SK22.

The proposed rehabilitation of slopes involves hydro seeding or similar rehabilitation measures. The width of Secondary Access Roads will be reduced from 10m back to 6m and excess pavement will be graded onto the central portion of the road, replaced by topsoil and re-grassed. This procedure will further assist to minimise stormwater run-off and the potential for erosion.

3.5 Erosion and Sediment Control Plan

The most effective measure for reducing sediment discharges is to minimise the potential for erosion, and this is a matter that will be addressed via an Erosion and Sediment Control Plan (ESCP). WEL will commit to the preparation of an ESCP as part of an overall Environmental Management Plan. The ESCP will be prepared in association with the Regional Council, thereby ensuring that Regional Standards will be met.

The Erosion and Sediment Control Plan will comprise a range of erosion control methods to minimise earthwork effects. For this site, it is anticipated that the ESCP will include:

- Limits of disturbance
- Construction staging and sequencing
- Identifying areas of high risk near watercourses
- Special protection of steep slopes
- Protection of natural watercourses
- Erosion control measures
- Type and extent of perimeter controls
- Sediment retention devices design and maintenance
- Assigning responsibilities for implementation and monitoring.

The general philosophy of the ESCP will be to minimise the overland flow of stormwater through the disturbed areas and to utilise the existing grass cover as a natural filter and buffer zone. Areas adjacent to watercourses will require special consideration and will involve the construction of specific control measures such as silt fences, hay bale barriers, bunding, contour drains and retention ponding where topography permits.

The proposed methods will ensure that erosion or run-off does not have a direct affect on sensitive ecological systems, or on adjoining properties. WEL proposes that the approach taken by the ESCP should be agreed through consultation with Environment Waikato, and also listed as a condition of the district land use consent (see Condition 4 in Section 21 of the district consent application document).

3.6 Other effects

The potential for discharge from spillage at the concrete batching plant, or from wash-down of trucks has been considered. Similarly, the storage and mixing of fuels or other hazardous substance associated with the site construction needs to be controlled. The effects of discharge from these sources can be well controlled through various mitigation measures. Dust from the earthworks and the concrete batching plant is another potential effect.

The control of all of these potential issues will be addressed by the project's proposed Environmental Management Plan, as discussed in section 4.

3.6.1 Visual effects

The visual and landscape assessment of the proposed WEL wind farm, prepared by Mansergh Graham Landscape Architects, identifies and analyses the potential effects on landscape and visual amenity values. It also provides recommendations on how such effects may be avoided, remedied or mitigated. The full landscape assessment report is enclosed as Appendix A.

The relevant key findings from the assessment are as follow:

- The project site is characterised by a high degree of modification to the original land cover. The land is predominantly used for pastoral grazing.
- The effects on landscape and visual amenity from the access road and other infrastructural elements will be more than minor during the construction period, and no more than minor post-rehabilitation.
- The anticipated disturbance to the natural land form of the Wharauroa Plateau and associated ridgeline will be insignificant.

The landscape assessment also proposes a rehabilitation strategy that recommends:

- Covering the turbine foundation pads and associated hard stand areas with topsoil and re-grassing so these areas visually integrate with the surrounding natural landscape
- Contouring of the cut and fill batters associated with the access tracks, borrow areas, and turbine (and associated hard stand) pads to reintegrate into the natural land form
- Revegetation (pasture) of all exposed earthworks (with the exception of the construction roads that will be reduced to five metres following installation and commissioning of the turbines). This includes the borrow area located on the side of the main access track to the site.

The intent of the rehabilitation strategy would be to integrate the disturbed land form, including cut and fill batters, back into the surrounding landscape, with appropriate revegetation (e.g. pasture), so the turbines appear to 'grow' out of the rural landscape.

Further, the rehabilitation strategy also recommends that a second phase of rehabilitation works is implemented following the decommissioning of the wind farm (should this occur). This would include returning the subject site to a similar landform, land cover and land use, as existed prior to the development of the wind farm.

3.6.2 Effects on Vegetation

WEL Networks commissioned Kessels & Associates Ltd to undertake an ecological assessment of the proposed WEL wind farm site. The study assesses the ecological (aquatic, terrestrial and avifauna) values that are supported within the project area, and the nature and magnitude of any effects arising from the proposed wind farm. The study also highlights mitigation measures required to address any potential adverse ecological effects. The full report is enclosed as Appendix C.

The Ecological Assessment found that the potential adverse ecological effects on indigenous vegetation are insignificant, as virtually no indigenous bush or scrubland would have to be removed or disturbed by the construction of any of the proposed turbines, their platforms or access roads. The vegetation at sites chosen for wind turbines consists entirely of exotic pasture, which is of minimal value from a biodiversity perspective. Several of the access roads would cross the many small seepage wetlands within the site. However, they are all currently grazed heavily by stock, and contain only common wetland species, almost all of them exotic. The small ecological sensitive sedge/toetoe wetland (near proposed Turbine 16) will not be affected by any access road.

There are several small gullies adjacent to the turbine sites, which are proposed to be used as fill sites. Each of these fill sites was inspected, and only one has a flowing spring stream and seepage wetland within it (Turbine 28). This seepage wetland is currently grazed heavily by stock, and contains only common wetland species, almost all of them exotic.

The only activity that would require the removal of mixed broadleaf-podocarp forest is the proposed widening and upgrading of Plateau Road. The clearance would involve the removal of less than 0.5 ha

of scattered shrubs and several pole miro and rimu trees along the margin the existing road. However, the ecological assessment considers the effects of proposed clearance as no more than minor due to the small area affected.

The proposed earthworks within the Wharauroa Plateau impose a risk of exotic weed invasion post-construction. The ecological report recommends re-grassing the affected turbine sites and incorporating them into the existing farming operation. Further, machinery and aggregates need to be clean and free from seed or plant matter. Provided that weed control is carried out, it is expected that pasture and scrubland species will quickly establish and dominate vegetative cover, suppressing weeds such as gorse and blackberry.

Further, the Ecological Study found that no significant streams or wetlands would be directly affected by the proposed wind farm, or by associated works such as access tracks or road realignments. However, the primary risk is that sediment from road works and turbine site construction could enter waterways and adversely affect aquatic macro-invertebrates or fish and their habitats.

The report advises that stormwater control and sediment management should be carefully considered during the design phase of the project. These measures should include the avoidance of filling near streams or wetlands (apart from the proposed designated fill sites), the stabilisation of fill and slip areas and the hydro-seeding of cuttings as soon as practicable. Provided standard good practice silt control techniques are implemented during construction, effects on waterways are expected to be no more than minor.

3.6.3 Archaeological Effects

WEL Networks commissioned an Assessment of Archaeological Issues to investigate if there are any potential archaeological sites within the proposed project area that may be adversely affected by the construction of the wind farm. Warren Gumbley of CFG Heritage Ltd carried out the assessment. The full report is enclosed as Appendix G.

The methodology of the assessment included an examination of the NZ Archaeological Association site record file, a literature review on the history of Raglan District, an examination of survey plans held by LINZ, and two site inspections in the company of members of Ngati Mahanga and representatives of WEL.

The assessment identified two archaeological sites within the proposed wind farm site - the Te Tihi o Tonganui Pa and the original Vanhoutte Homestead. Neither of the sites are considered to be directly affected by the proposed wind farm project and management of these sites can be successfully carried out through protection measures and procedures.

3.6.4 Cultural Effects

WEL Networks commissioned the Nga Uri a Mahanga Trust (NUAM) to prepare a Cultural Heritage Assessment Report (CHAR) covering the area known as Wharauroa – Te Uku (Raglan). The NUAM Trust represents the affiliated Marae within the Ngati Mahanga region and has mana whenua/historical occupation and ancestral succession status regarding the proposed wind farm project area. WEL Networks invited NUAM to assist in the facilitation of tangata whenua consultation by participating in discussions with marae within the Mahanga rohe as well as other neighbouring marae and groups. The full CHAR is enclosed as Appendix H.

The NUAM CHAR team, on behalf of the NUAM Trust Board, supports WEL Networks intention of developing a wind farm at Wharauroa. NUAM applied a qualitative and quantitative research approach. Site names and locations were obtained through interviews with leading kaumatua in the Wharauroa area, and from research of Land Court documents and also unpublished tribal written history relating to the Wharauroa area. This methodology has enabled both oral and written information to be assessed.

Further, a direct outcome of the CHAR process is WEL's adoption of the project name – WEL Wind Park "Te Hauhiko o Wharauroa".

The Wharauroa Plateau contains a number of sites and objects of cultural significance to tangata whenua, such as the Te Tihi-o-Tonganui pa site, trees, wildlife, springs and other landmarks. The CHAR identified the following issues and sites that require particular consideration during construction:

- Te Tihi-o-Tonganui Pa site: care must be taken when construction begins on Turbine 5 which is close to Te Tihi-o-Tonganui Pa site. The existing fence at the area immediately surrounding the Pa site should remain and be maintained during construction to prevent any damage.
- Run-off: during construction of roadways and any buildings on the Wind farm site WEL must ensure fencing, silt fences, sediment ponds or barriers to stop any pollution or run off reaching the waterways.
- Borrow Pits: Two potential Borrow Pits have been identified on the WEL Wind farm site to provide additional resources for the building of roads and infrastructure. The Borrow Pit closest to Turbine 4 and the Borrow Pit between the Anemometer and Telecom tower are the two potential Borrow Pits that will add additional stone resources. The NUAM representative will be on site to offer advice as to how to proceed in the event artefacts are found.
- Major Earthworks: work carried out on site that may discover artefacts including construction of roads and mining of Borrow Pits will require notification of intention to the NUAM representative.

It is noted that archaeology, ecology and civil consultants have addressed all of the above issues in their reports. For further information, please refer to the following sections of this report: Appendix C for the Ecological Assessment, Appendix D for the Civil Engineering Report and Appendix G for the Archaeological Assessment.

The CHAR recommends that WEL adopts the procedures and protocols as set out in the CHAR report when carrying out works within the wind farm project area. WEL has agreed to contact the assigned NUAM representative when construction commences in proximity to Turbine 5, when forming the access road and when mining the borrow pits. Further, WEL intends to ensure that sufficient sediment and erosion control measures are implemented, such as silt fences and sediment ponds in order to protect streams from adverse environmental effects.

3.7 Summary of Issues and Effects

	ISSUE	RESPONSE	OUTCOME	RESIDUAL EFFECT
	Earthworks			
1	Silt and Sediment Controls - may result in adverse effects on downstream waterways	Controls designed in accordance with EW Silt, Sediment and Erosion Control Guidelines. Control design and plans submitted as part of the Environment Management Plan.	Silt and Sediment controlled in accordance with EW guidelines. Minimal effects on downstream water channels. Effects mitigated.	No more than minor
2	Erosion - open excavations exposed to rainfall and erosion	Controls designed to minimise exposed soils at any one time. Construction systems reactive to rainfall. Soils are generally plastic and not so susceptible to erosion. All bare surfaces to be made good during construction with hydroseed, straw grassing or similar	Erosion controlled in accordance with EW guidelines. Effects mitigated.	No more than minor

	ISSUE	RESPONSE	OUTCOME	RESIDUAL EFFECT
3	Stability - earthworks may cause a failure of in situ soils as a result of cut or fill slopes	The detailed investigations and design by a qualified geotechnical engineer will ensure that required stability and controls are in place.	Slopes are constructed to a stable angle. Effects avoided.	No more than minor
4	Disposal Sites - long term stability of the larger disposal areas.	The detailed investigations and design by a qualified geotechnical engineer will ensure that required stability and controls are in place.	Disposal sites are suitably buttressed and drained. Effects avoided.	No more than minor
	Roading			
5	Pavement material - unsealed road exposed to vehicle loads and stormwater	Material design and specification will make allowance for the properties of basalt basecourse. Use of WDC plastic running course will mitigate problems and contractor methodology.	Pavement materials resistant to pavement loads and stormwater. Effects remedied.	No more than minor
6	Steep sections of unsealed internal access roads - traction for vehicles and control of stormwater.	Confirmation from Tranzcarr Heavy Haulage reveal that 10% gradient is suitable (unsealed). Gradients between 10-17% are also suitable so long as they are sealed. Cross fall on steep sections of roads will be increased to 6% to minimise stormwater running longitudinally down the road. Side channels will be protected with rock.	A steep section of Secondary Access Road will be sealed. Effects avoided.	None
	Stormwater			
7	Access roading will pass over a number of natural waterways.	Culverts will be constructed to cope with a 5 year return period and overtopping for a larger rain event. The construction of the proposed culverts is a permitted activity and does not require resource consent. A detailed stormwater management plan will be submitted to Council for approval.	EW Consent controls along with careful site management and detailed design will ensure the effects are minimised. Seven key locations have been identified. Effects mitigated.	No more than minor.
	Water take			
8	Water take from the plateau area may cause effects on the downstream low flows.	A separate EW consent will be sought, if necessary, for this following analysis of the possible requirements (i.e. insitu soil water content testing). Q5 low flow calculations will be undertaken to ensure the effects are minimised. Alternatively, all additional water requirements can be met by the quarry (provided for in the Te Mata Quarry Consent)	EW Consent controls on water take from the plateau water channels. Effects mitigated.	No more than minor.

4. Environmental Management Plan

4.1 Mitigation of Environmental Effects

The various assessments undertaken by WEL's consultants have identified the need for mitigation measures and good environmental control. Without mitigation and environmental control, there will be potential effects related to construction, traffic, wireless communications, landscape, cultural heritage and ecology.

In some cases, the consultants' assessments specifically identified elements of the design, construction and operation of the wind farm that require mitigation. In other cases, further work has been identified as being necessary to more completely quantify the nature of effects. In a typical resource consent application, mitigation measures might be directly incorporated as consent conditions. However, given the scale of the WEL Wind farm project, and the range of effects that require management, the company has committed to the preparation of a comprehensive Environmental Management Plan (EMP). An EMP should provide certainty to the Council and other interested parties that WEL is committed to a development that minimises adverse environmental effects.

Using an EMP will allow the details of mitigation to be determined as the design progresses (for example, as the siting of turbines and access roads are fine tuned). WEL proposes that a requirement to prepare an EMP should be imposed as a condition of the resource consent, as set out in proposed condition 4 (see Section 21 of the district consent application). The overall requirement to prepare an EMP will be set out via WDC land use consent. However, the proposed incorporation of a Erosion and Soil Control Plan (ESCP) would be subject a regional consent condition.

The management of effects arising from the proposed wind farm needs to be addressed on a two-Part basis. Those two Parts are the construction phase, and the long-term operation of the wind farm. The EMP will specifically address each Part. The intent of the EMP is set out in section 4.2 below.

4.2 Purpose of an Environmental Management Plan

An EMP is a tool to ensure that the actual environmental effects of a development are consistent with those evaluated in the assessment of environmental effects. In particular, it provides a means of:

- Establishing environmental goals and strategies for the main environmental issues;
- Recording the relevant legal and other obligations, including details of mitigation measures to be implemented;
- Defining best practice management procedures and allocating responsibilities to ensure that the obligations are met and mitigation measures are effectively implemented; and
- Ensuring that the implementation and outcomes are appropriately monitored.

4.3 Management of Construction Effects

An EMP for construction effects management will be prepared to address all relevant environmental requirements for the construction stage of the project. The Construction EMP will comprise generic procedural components, and issue-specific management components. It will be an on-site document, with some specific environmental issues recorded in site plan format (annotated with relevant standards) to ensure a user-friendly document.

Prior to the commencement of specific elements of the construction works, each individual contractor will be required to identify environmental requirements relating to their element of the works. From that, they would need to develop an approach relevant to those works and consistent with the EMP.

Please refer to Section 17 of the WDC resource consent application for further details on the EMP.

5. Policy Statements and Plans

5.1 Waikato Regional Policy Statement

The Waikato Regional Policy Statement (WRPS) was proposed in October 1993 and became operative on October 2000. The WRPS sets out the significant resource management issues, which should be considered when managing natural and physical resources within the Region.

The land and soil section (Section 3.3) and the water section (Section 3.4) of the RPS are considered to be most relevant to the proposed activities, and in particular the following objectives and policies:

5.1.1 Accelerated Erosion (Section 3.3.7)

This section of the RPS identifies the following issue:

Accelerated erosion of soil resources is leading to:

- *Loss of soil productivity, capability and/or versatility*
- *Downstream sedimentation resulting in degradation of water quality, aquatic ecosystems and water supply systems, and increased flooding potential*
- *Adverse effects on the aesthetic, scientific and cultural values associated with land*

Objective: Net reduction in the effects of accelerated erosion and those effects avoided where practicable

Policy One: Avoid, Remedy Or Mitigate Accelerated Erosion

Ensure that land users:

a) avoid where practicable, practices that cause accelerated erosion; and
b) remedy or mitigate the adverse effects of accelerated erosion if it occurs.

Commentary:
WEL's project development philosophy is reflected in the effort to ensure that the proposed earthworks design reflects best practice in accordance with EW's *Erosion & Sediment Control Guidelines for Soil Disturbing Activities*. WEL proposes to develop and implement an Erosion and Sediment Control Plan (ESCP) to monitor and ensure compliance with the Regional Plan and relevant consent conditions. The ESCP will form part of an overall Environmental Management Plan (EMP). WEL will commit to the EMP as a means of ensuring that all phases of the wind farm construction and operation minimise the potential for adverse effects, including erosion.

5.1.2 Water Quality (Section 3.4.5)

This section of the RPS identifies the following issue:

There is potential for the reduction of water quality from:

1. *The cumulative effects of point source and non-point source discharges of contaminants.*
2. *Land uses which affect the margins and beds of water bodies.*
3. *The taking or impoundment of water.*

Objective: Net improvement of water quality across the Region.

Policy Two: Other Water bodies
Determine the characteristics for which other water bodies are valued and manage those water bodies to ensure that any adverse effects on those characteristics are avoided, remedied or mitigated.

Commentary:
As discussed in the above Assessment of Environmental Effects, the proposed activity will be undertaken to very high standards with the aim of minimising any adverse environmental effects. The water quality of the watercourses within the catchment of the project area may be temporarily affected by the proposed earthworks, placement of overburden, culverts and potential water take. However, any temporary effects will be avoided, remedied or mitigated. In the long term, the ongoing adverse effects of the proposed activity are considered to be no more than minor.

5.2 Proposed Waikato Regional Plan

The Proposed Waikato Regional Plan contains policies and methods to manage the natural and physical resources of the Waikato region. The Plan is not yet operative. It is currently subject to references to the Environment Court. This means that the Plan's current status varies, depending on appeals. As outlined under section 2 of this report, the proposed activity would require regional land use consent from EW to undertake bulk earthworks and deposit large volumes of overburden. The relevant Objectives and Policies are discussed below.

5.2.1 Earthworks

Soil Disturbance, Roading and Tracking and Vegetation Clearance outside of high risk erosion areas are deemed a Discretionary Activity pursuant to Rule 5.1.4.13 of the PWRP and includes:

1. *Any soil disturbance, roading and tracking, and vegetation clearance and any associated deposition of slash into or onto the beds of rivers and any subsequent discharge of contaminants into water or air that does not comply with the conditions of Permitted Activity Rule 5.1.4.11;*
2. *Soil cultivation within two metres of the bed of a river or lake that does not comply with Rule 5.1.4.12;*

Further, the Regional Plan treats large-scale earthworks in high risk erosion areas as a Discretionary Activity under Rule 5.1.4.15.

High risk erosion areas are defined by the Plan as any part of any activity (unless otherwise permitted):

a. where the pre-existing slope of the land exceed 25 degrees; or
b. on coastal frontal dunes on the East Coast; or
c. on coastal sand country on the West Coast (Mokau to Karioitahi) where loose sands are at the ground surface or within 10 centimetres of the surface; or
d. within 50 metres landward of the coastal marine area of an estuary, except in the landward margin of an authorised stopbank; or
e. adjacent to water bodies (including ephemeral watercourse draining catchments greater than 100 hectares, but excluding any other ephemeral rivers or streams), where:
    i. the land slope is between 0 degrees to 15 degrees – within 10 metres from any lake, wetland or the bed of a river or lake, or
    ii. the land slope is greater than 15 degrees – within that distance from the wetland, the bed of a river or lake, or from mean high water springs to the first point at which the slope reduces to 15 degrees or less, or 100 metres (whichever is the lesser, outside the minimum distance described in i).

Policy 2 under Section 5.1.3 of the Regional Plan prescribes the use of regulatory and non-regulatory approaches of management for soil disturbance and vegetation clearance activities in high risk erosion areas. Possible regulatory and non-regulatory approaches include the minimisation of adverse effects associated with soil disturbance and vegetation clearance in these areas.

Further, Policy 3 suggest the utilisation of environmental education in order to promote the following: good practice guides and incentives, soil and land management practices that avoid adverse effects on soil productivity, capability and versatility and the off-site effects of sediment discharge, and remedies or mitigates these effect if they do occur.

Policies 2 and 3 directly reflected by the overall construction philosophy of the applicant. Wherever possible, soil disturbance and vegetation clearance will be avoided or reduced to a minimum. Earthworked areas will be reinstated as soon as possible by employing best practice measures as recommended in EW's *Erosion & Sediment Control Guidelines for Soil Disturbing Activities*.

The applicant also proposes to develop and implement an Erosion and Sediment Control Plan (ESCP) in consultation with the Regional Council. The ESCP will form part of an overall Environmental Management Plan (EMP). WEL will commit to the EMP as a means of ensuring that all phases of the wind farm construction and operation minimise the potential for adverse effects. Give the above measures proposed, it is considered that the proposed activity fully complies with Policies 2 and 3, and will also accomplish the associated Objective 5.1.2, which aims to achieve a net reduction of accelerated erosion across the Region.

5.2.2 Overburden Disposal

Under Rule 5.2.5.3 of the PWRP, Large Scale Overburden Disposal is deemed to be a Discretionary Activity.

Policy 2 in Chapter 5.2.3 provides for other discharges onto or into Land, including large-scale overburden discharge. Policy 2 provides for those discharges onto or into land that do not meet the criteria in Policy 1 for "Low Risk Discharges Onto or Into Land". The policy gives primacy to avoiding adverse effects. However, it acknowledges that where adverse effects cannot be avoided when discharging onto or into land, they should still be remedied or mitigated. The extent to which adverse effects are to be remedied or mitigated can be determined through the resource consent process.

In order to manage the discharge of overburden onto land under Policy 2, the following adverse effects shall be avoided where practicable, and remedied or mitigated where they cannot be avoided:

- *Contamination of soils with hazardous substances or pathogens to levels that present a significant risk to human health or the wider environment*
- *The discharge is not inconsistent with policies in Section 5.1.3*
- *Any effect on water quality or aquatic ecosystems that is inconsistent with the purpose of the Water Management Classes as identified by the policies in Section 3.2.3*
- *Damage to archaeological sites, waahi tapu or other identified sites of importance to tangata whenua as Kaitiaki.*

The following additional standards are set out under Policy 1:

- *the discharge will not result in any effect on water quality or aquatic ecosystems that is inconsistent with the purpose of the Water Management Classes as identified by the policies in Section 3.2.3*

- *The activity shall not increase the concentration of suspended solids in the receiving water by more than 10 percent and the activity shall not result in the level of suspended solids exceeding 100 grams per cubic metre suspended solids concentration (s3.2.4.5).*

It is considered that the proposed activity complies with the Policies under section 5.2.3 of the PWRP and is also consistent with the associated Objective 5.2.2. In regard to the objective, the measures proposed by the applicant will mean that the activity will not:

- *Contaminate soil to levels that present significant risks to human health or the wider environment*
- *Have adverse effects on aquatic habitats, surface water quality or ground water quality that are inconsistent with the Water Management objectives in Section 3.1.2*
- *Have adverse effects related to particulate matter, odour or hazardous substances that are inconsistent with the Air Quality objectives in Section 6.1.2*
- *Be inconsistent with the objectives in Section 5.1.2.*

In addition, the measures proposed by the applicant mean that the activity will:

- *Avoid significant adverse effects on the relationship that tangata whenua as Kaitiaki have with their taonga such as ancestral lands, water and waahi tapu*
- *Remedy or mitigate cumulative adverse effects on the relationship that tangata whenua as Kaitiaki have with their identified taonga such as ancestral lands, water and waahi tapu.*

5.2.3 Diversion of Water

The diversion and subsequent discharge of water does not comply with the Permitted Activity requirements of the PWRP is deemed a Discretionary Activity pursuant to Rule 3.6.4.13.

The above rule covers the following activities:

1. *Damming or diversion of water by way of a stopbank, and*
2. *Diversion of water, and*
3. *The use, erection, reconstruction, placement, alteration or extension of any structure on or in the bed of a river or stream associated with the above activities that:*
    - *i. is undertaken after the date of notification of this Plan, or*
    - *ii. affects a Significant Geothermal Feature*
    - *iii. does not occur in a cave system;*

Objective 3.6.2 prescribes that damming and/or diverting of water is undertaken in a manner that:

- *Does not have adverse effects that are inconsistent with the water management objectives in Section 3.1.2.*
- *Does not have adverse effects that are inconsistent with the river and lake bed structures objectives in Section 4.2.2.*
- *Does not obstruct fish passage where it would otherwise occur in the absence of unnatural barriers, so that trout or indigenous fish can complete their lifecycle.*
- *Results in no increase in the adverse effects of flooding or land instability hazards.*
- *Results in no loss of existing aquatic habitats as a consequence of channelisation of rivers.*
- *Increases the use of off-stream dams for water supply purposes as an alternative to dams in perennial streams.*

Policy 2 under section 3.3 of the PWRP (Damming and Diverting of Water in Perennial Water Bodies) states that the damming and diverting of water in perennial water bodies is to be managed in a manner that ensures:

- *Adverse effects on surface water bodies that are inconsistent with the policies in Section 3.2.3 of this Plan are avoided as far as practicable and otherwise remedied or mitigated.*
- *Adverse effects of the use, erection, reconstruction, placement, alteration or extension of structures on the beds of lakes or rivers associated with the activity that are inconsistent with the policies in Section 4.2.3 are avoided as far as practicable and otherwise remedied or mitigated.*
- *That the activity will not obstruct fish passage of trout and/or indigenous fish to complete their lifecycle where it would otherwise occur in the absence of unnatural barriers.*
- *The adverse effects of flooding or erosion on neighbouring properties are avoided, remedied or mitigated.*
- *Changes in the catchment and sediment transport processes have no significant adverse effects on water quality, habitat and flow regimes in perennial streams.*
- *Any significant adverse effect on cave systems are avoided or mitigated.*
- *Any adverse effects on wetlands[2] that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna are avoided, remedied or mitigated in accordance with Policies 1 and 2 of Chapter 3.7.*

5.3 Summary

Sections 5.1 and 5.2 above provide a brief assessment of the relevant provisions of the Regional Policy Statement and Objectives and Policies of the Regional Plan. The wind farm project requires regional land use consent for the large-scale placement of overburden onto land and earthworks in high-risk erosion areas. Given the above assessment, it is considered that the proposed activity is consistent with the purpose and principles of the Resource Management act 1991, and the objectives and policies contained within the Waikato Regional Council's Policy Statement and the Proposed Plan.

6. Consultation

6.1 Background

As an electricity distribution company which is community owned, WEL is committed to pro-actively informing and consulting with both the local and general community and has done so with respect to the WEL wind farm proposal. WEL's consultation philosophy has been to embrace a process that is comprehensive, pro-active, and which commenced right at the start of the project.

WEL adopted a consultation strategy which involved identifying all key stakeholders and landowners located within 5 kilometres of the site. Contact was made with all parties early on in the process and well before the various technical studies were undertaken. Initial communication was via mail, which invited a phone call and a personal visit. Any queries were followed up. Approximately 30 meetings have been held with landowners and key stakeholders since May 2006. A Public Open Day was held in May 2006 to provide an opportunity for anyone to speak to project team members about their area of expertise and have their questions addressed. A follow up Public Open Day in late November 2006 provided an opportunity for the project team to discuss their findings with local residents.

This process has enabled issues of concern to be communicated back to the project team and where possible, they have been addressed by way of design changes, conditions or information. The final application therefore reflects, as much as possible, the concerns of the local community.

The overall consultation process was managed by the consultation team consisting of Kellie Ellis (Project Delivery Manager, WEL) and Chris Dawson (Consultation Manager, Bloxam Burnett & Olliver Ltd). A detailed report on the consultation undertaken is enclosed as Appendix J.

6.2 Regional Concerns

In the course of consultation WEL has received two responses with particular regard to regional matters. Whaingaroa Harbour Care were concerned about sediment discharges that may occur during construction. Iwi was the only other party that expressed a concern about sediment affecting waterways. WEL's response involved referring those parties to plans to control sediment in general accordance with the principles of EW guidelines. While no formal response have been received it is understood that all points raised were clarified and both parties are comfortable with the information provided.

6.3 Initial Key Stakeholders

WEL has identified a group of initial 'key stakeholders' to be consulted. These parties are key to the process because they represent well defined interests or have particular public responsibilities. Consultation has already taken place with these stakeholders in the lead up to lodging the application, and will continue in relation to any outstanding issues.

An introductory letter and information pack was sent out to all stakeholders identified as having a relationship or link to either the wind farm site or the issues arising from the wind farm. This initial approach was then followed up with a phone call to the key stakeholders with a request to meet and introduce the project.

Consultation was undertaken with the following key stakeholders:

- Waikato District Council
- Environment Waikato
- Transit New Zealand
- Department of Conservation
- Whaingaroa Harbour Care
- Genesis Energy
- Greenpeace New Zealand
- Waipa District Council
- Energy Efficiency and Conservation Authority
- Telecom
- Auckland/Waikato Fish and Game
- Whaingaroa Environment Centre
- Civil Aviation Authority

Other stakeholders that were consulted with include:

- Forest & Bird
- Pirongia Restoration Society
- NZ Wind Energy Association
- Topdressing interests
- Raglan Airstrip operators (Waikato District Council)
- Radio Spectrum
- Broadcast Communications Limited
- Maritime Safety Authority (MSA)

Regular update meetings were subsequently held with the Department of Conservation (DoC), Waikato District Council and Transit New Zealand due to their interest in key aspects of the project.

Outcomes of the key stakeholder consultation include:

- The signing of a Memorandum of Understanding (MoU) between WEL and Telecom over the continued operation of the existing Telecom radio transmission mast
- The Civil Aviation Authority (CAA) issuing a "Determination of Hazard in Navigable Airspace" and confirming which of the turbines would need to be lit (see Appendix L(2))
- As at the date of this AEE, DoC and WEL are in the process of agreeing on a MoU regarding mitigation and support for relevant bird and bat environmental programmes as well as the monitoring of site impacts.
- Transit New Zealand has provided written approval to the traffic related issues associated with the wind farm (see Appendix L(6)).

6.4 Consultation with Residents

WEL initiated contact with all local landowners within 5 kilometres of the project site. The consultation team made the offer to meet these landowners at their homes to discuss the wind farm proposal in detail. Approximately 30 surrounding landowners took up this offer. Follow-ups were arranged where necessary. The key concerns expressed during the first round of consultation related primarily to visual effects of the wind farm, potential noise impacts, consequential effects on property values and health.

An independent assessment of potential health issues was carried out in the course of investigations. WEL was advised that there are no aspects of the construction or presence of the proposed wind turbines which give rise to cause for concern from a public health point of view and no issues during

construction which cannot be readily mitigated from an occupational health and safety or environmental health point of view. The WEL wind farm will prove to be a safe and sustainable means of generating power from energy otherwise lost in the environment and will provide significant benefit to surrounding communities.

In order to allow potentially affected landowners to familiarise themselves with the size, shape and sounds of a working wind farm, WEL organised six chartered flights to Palmerston North and a tour to visit the Te Apiti wind farm near Ashhurst. A WEL staff member accompanied each trip, answering questions and highlighting key points of interest along the way. The overall purpose of this trip was to allow everyone a chance to form their own opinion about wind farms, beyond the information material provided.

Further, WEL organised two Public Open Days, forming an integral part of the consultation programme. The Open Days were held at the Te Uku Hall on 24 May 2006 and 27 November 2006. All key consultants attended and WEL staff were available for the duration of the Open Days to answer questions, provided information and talk to attendees. The Open Days presented an excellent opportunity to engage and consult with the local community on an informal basis, but with the possibility to discuss specific issues one-on-one.

6.5 Consultation with Iwi

The Resource Management Act requires consent authorities to have regard to Maori cultural issues and potential impacts on sites of significance. Although the Act places the onus on consent authorities (in this case Environment Waikato) to consult with iwi, WEL believes that direct consultation is also important.

WEL initiated consultation with local iwi at the same time as the public announcement of the project. Ngati Mahanga confirmed having mana whenua status over the area within which the project site is located. A small working team from Ngati Mahanga was subsequently engaged by WEL to research and produce a Cultural Heritage Assessment Report (CHAR). The CHAR was designed to assess the historical relationship between Ngati Mahanga and the wind farm site and to assess any potential impacts of the project on sites or areas of cultural heritage significance

The CHAR concluded that no sites of significance would be impacted by the proposed activity and that an identified pa site was sufficiently separated from the closest works. In addition a series of protocols were agreed through the CHAR process in the event of the site works uncovering any artefacts or sites of possible significance. NUAM also agreed to participate in the opening ceremonies if the wind farm is built. Please refer to section 3.6.4 of this report for further details.

6.6 Consultation about Flora and Fauna

Regular consultation meetings have been held with Department of Conservation (DoC) staff to identify and address issues of concern. WEL's ecological consultant, Mr Gerry Kessels identified and refined the ecological assessment of effects based on preliminary feedback from DoC staff. Key concerns from DoC staff related to the potential effects on short tailed bats and the New Zealand Falcon in terms of impacts from collision with the turbines in flight. WEL has developed a Memorandum of Understanding (MoU) with the Department of Conservation which sets out the detail of how these potential issues are monitored and addressed, if necessary. It is expected that WEL will be able to sign a Memorandum of Understanding (MoU) with the Department shortly.

6.7 Consultation with RMA Consent Authorities

Resource consent must be obtained to allow the wind farm to be built. Waikato District Council (WDC) has the statutory responsibility for assessing land use consent applications and deciding whether to grant consent. WDC made it clear early in the consultation that the application would be publicly notified and that a hearing would be held. WEL established a close working relationship with the Council through various pre-application meetings and WEL's involvement in the statutory process of the Proposed District Plan. WEL and WDC agreed to provide the key specialist reports to Council peer reviewers prior lodgement of this application in order to address any outstanding issues prior to public notification.

Environment Waikato (EW) has statutory responsibilities for controlling the effects of earthworks, and impacts on natural watercourses. WEL's discussions with EW have confirmed that resource consent for earthworks, culverts and overburden disposal is required from the Council. All works will be carried out in compliance with a proposed Erosion and Sediment Control Plan (as part of a wider Environmental Management Plan) and the EW "Erosion and Sediment Control Guidelines for Soil Disturbing Activities".

7. Conclusion

This application has been sought to allow the construction of the proposed WEL Wind Park on the Wharauroa Plateau. The proposal involves earthworks volumes of approximately 350,000 m^3 cut material, 300,000 m^3 of structural fill and approximately 30,000 m^3 of spoil deposits at designated sites. Due to the scale of the earthworks, resource consent for land use is required for a Discretionary Activity. In addition, the proposal seeks a water permit for stream and stormwater diversion. The proposed culverts and the additional water take, if required, are Permitted Activities and do not require consent.

The applicant has commissioned specialist consultants to prepare the reports referred to in the AEE, including Civil, Ecological and Visual assessments. The finding of these reports assisted in the overall evaluation of the proposal.

It is considered that the proposed activity is consistent with the Regional Policy Statement and the Objectives and Policies of the Proposed Waikato Regional Plan. The Assessment of Environmental Effects demonstrates that parts of the proposal will have some temporary effects. However, the applicant proposes some comprehensive mitigation measures, in particular stormwater and sediment control measures that will limit effects during the construction stage. Overall, it is considered that the environmental effects of the proposal after construction will be no more than minor.

WEL Networks assumes that EW will impose appropriate conditions on this consent, if necessary.