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Proposed Waikato District Plan Landscapes

GSNZ Evidence in response to recommendations on our submission No 8

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1. INTRODUCTION

- 1.1 My name is Bruce Hayward and I present this submission on behalf of GSNZ in my voluntary capacity as Chairperson of GSNZ's Geoheritage Subcommittee, a position I have held since 1985.
- 1.2 I have been a practicing geoscientist for 45 years and have 40 years of experience in geoheritage advocacy and assessment throughout New Zealand.
- 1.3 I undertook graduate thesis research on volcanic and sedimentary rocks in Waikato and Auckland regions through the University of Auckland.
- 1.4 I am a former member of the NZ Conservation Authority and Auckland Conservation Board and a former President of the Geological Society of New Zealand.
- 1.5 I have published three books promoting the protection of New Zealand's geoheritage, karst and coastal landforms through recognition as ONF under the RMA.
- 1.6 I have published books for the public that explain the geology, volcanoes, and fossils of northern New Zealand.
- 1.7 This evidence has been reviewed by the GSNZ Subcommittee members all of whom support it being submitted and strongly support its requests.
- 1.8 The NZ Geopreservation Inventory of significant geological and landform features (referred to in our submission and the operative Waikato District Plan) was established by the Geological Society of NZ under my convenorship in 1983 as a resource for proactive advocacy for the protection of NZ's geoheritage. Its compilation of outstanding geoheritage features in New Zealand has been funded over many years by NZ Lottery Board and the Department of Conservation starting in the 1980s. Lottery Heritage also funded national reviews of karst landforms and coastal landforms in the 2010s.
- 1.9 The NZ Geopreservation Inventory is publicly available with maps on the web (since 2015) and has been publicly available in print for 25 years. It now contains documentation of the heritage values and maps of over 3200 sites countrywide, including about 60 from Waikato District.
- 1.10 In the absence of others that could be speaking out, it has fallen upon the limited personnel and voluntary resources of the Geoscience Society of New Zealand to provide the **voice** for the outstanding natural geoheritage features of New Zealand.

2. GEOHERITAGE IS EVERYONE'S HERITAGE AND NEEDS PROTECTION

- 2.1 Humans have always been aware of the need to preserve our memories - our cultural and historic heritage. Now the time has come to ensure we document and protect the world's geological heritage before we destroy it all.
- 2.2 The past of the Earth is no less important than that of human beings. Human history and the history of the Earth are closely linked. Earth's origins are our origins, Earth's history is our history and Earth's future will be our future.
- 2.3 In the face of rising populations and increasing pressures on our land, we need to make a greater effort to protect the history of our Earth that was written in the rocks and landforms before humans evolved - this is **our geoheritage**. To achieve this requires a greater public appreciation and understanding of the past history of our part of the Earth, how it evolved through to the present day and how it is now being lost and destroyed by thoughtless human actions.
- 2.4 Just as an old tree keeps the records of its growth and life in its tree rings, so too the Earth retains memories of its past ... a record inscribed both in its depths and on the surface, in the rocks and in the landforms, a record that can be read and translated. In New Zealand the rocks and landforms contain a record of the amazingly complex history of the origins of our country and its biota.
- 2.5 We need to ensure the long-term survival of the best examples of these landforms and rocks that contain the clues (some clear and obvious, some less so) to understanding our land and our place on Earth.
- 2.6 Hopefully there will be sufficient representative examples of our diverse rock exposures and landforms remaining for our grandchildren and great grandchildren to appreciate and understand that history and for many more generations of geologists to study and extract a far more complete and precise history of our unique part of the World for all to learn from and enjoy.
- 2.7 Unfortunately this proposed Waikato District Plan **fails** to provide for any protection of this geoheritage that nature has bestowed upon us.
- 2.8 Each outstanding feature that is damaged or destroyed equates to tearing out and burning a page from the history book of our country and your District. Your actions will be judged by future generations.
- 2.9 Waikato District has an opportunity NOW to avoid what happened in the first 150 years of Auckland City (and the former Manukau City) which suffered the destruction of

many of its volcanoes through quarrying, with dense housing and factories constructed over the sites of others.

3. THE BOFFA MISKELL RESPONSE TO GSNZ SUBMISSION

3.1 It gives me no pleasure to be preparing this extended evidence in response to the WDC and Boffa recommendations on our Society's submission. I do so in my own time on behalf of the Geoscience Society of NZ, because I believe strongly that the geoscience community needs to advocate for the long-term protection of New Zealand's diverse and irreplaceable geoh heritage in the face of this proposal to discard the existing geoh heritage protection by your Council when what is needed is much more.

3.2 Boffa Miskell's response should have been to acknowledge that their approach had inadvertently eliminated ALL the existing and potential additional protection of geoh heritage in the Waikato District.

3.4 We argue that Boffa Miskell is wrong in their **restrictive** definition of ONFs to "small landscape features" that "are generally experienced from outside the features boundaries" and that they **must** rate as "moderate" or higher in **ALL** of the three **landscape** assessment categories of "biophysical, sensory and associative".

3.5 The Boffa Miskell response admits (3.2) that: "*Smaller geological features where they cannot be experienced outside the feature itself have not been included. This does not lower the geological importance of the feature ...*"

There is no basis in the RMA or case law that excludes outstanding geoh heritage features on the basis of their size or lack of landscape values from qualifying as ONF. We absolutely agree with BM that being small does not lower their importance, but if this makes them ineligible, in their definition, to qualify as ONF, how are they to be protected from the adverse effects of inappropriate ... (RMA Clause 6b)?

3.6 We are happy to note that the Boffa Miskell response (3.7, para 2) says "The importance of the Geopreservation features within the District are not questioned or countered in regard to their geological importance." However we find no basis for then rejecting them as existing or potential additional ONF in the next sentence (3.7, para 2): "The key consideration and difference is the application of scale and method with regard to the weighting of the dimensions of landscapes and features."

- 3.7 We expected the brief response from WDC would have been to **recommend** that at the very least, the current category for geoheritage ONFs in the operative plan (Franklin Section) be retained, incorporated into the ONF and built upon, by:
- a) Obtaining maps for the existing ONFs (publicly available for many years)(see Appendices 2, 3) and increasing their precision;
 - b) Contracting someone with geoscientific/geoheritage expertise to fully document and assess the geoheritage values (using the assessment criteria in the AUP, Northland Regional Policy Statement or GSNZ Best Practice Guide, see Appendix 1) of the existing scheduled ONFs and those recommended in the GSNZ Submission;
 - c) Using the AUP or Whangarei District Plan as a guide, develop rules to guide assessment of proposed activities within these ONFs, depending upon their category of sensitivity and values.
 - d) Begin the process of discussions and notifications with landowners effected (see 3.9).
- 3.8 The above actions (3.6 a-c) would unlikely cost the public purse very much compared with the original Landscape Study.
- 3.9 We would prefer a process of working with BM to resolve the problem with their landscape methodology that results in exclusion of geoheritage from ONF scheduling. We hope that this can be achieved within this present PWD Plan process.
- 3.10 If this hearing determines it is not possible to be resolved within the present PWDP process then we suggest the best remedial action that we can conceive would be to retain the current ONFs from the Franklin District Plan and begin an immediate Plan Change proposal to start work on the Geoheritage assessment and mapping of possible ONFs that we believe should have been undertaken in the first place (using the same means as adopted in similar situations for the Northland regional Policy Statement and Auckland Unitary Plan) (see later).
- 3.11 The Operative Waikato District Plan, Franklin Section 5.2.3 says:
- “District Council staff do not have the expertise to identify the significance and vulnerability of many natural features or assess their condition. The Council therefore needs to work in conjunction with agencies that have such expertise.”*
- Unfortunately this clearly has NOT happened.
- 3.12 The Geoscience Society of NZ has approached WDC Planners on a number of occasions over the past several years seeking information about what was happening with the proposed District Plan review and seeking assurance that the district’s outstanding

natural geoheritage features would get proper appraisal and protection. We have had no meaningful responses to any of our approaches, except one late in proceedings (16 Aug 2018 from Jane Macartney) that assured us that the existing ONFs were likely to be retained (see Appendix 4).

“My understanding is yes, all ONFs in the Franklin Section of the WDP have been carried over into the Proposed WDP - but I'm going to check that with my colleague, Giles Boundy, who is presently on leave.”

- 3.13 We were never informed by Giles Boundy or any other WDC planner that the existing ONFs would be lost, even though this seemed to be the case from our reading of the Landscape Study report. Nowhere in that report nor in the PWDP can we find it said that the nine existing geoheritage ONFs were planned to be dropped. If it had been, we suspect there would have been more submissions that opposed the proposal.

4. ONF IS THE ONLY PLACE WHERE GEOHERITAGE CAN BE PROTECTED UNDER THE RMA

- 4.1 We believe that everyone would agree that the RMA was established for the sustainable use and protection of ALL of New Zealand’s natural resources and heritage. As such Clause 6 of the RMA, Matters of National Importance states what was considered to be the diversity of natural and physical resources that should be recognised and their preservation/protection provided for in Regional and District Plans:

- a. natural character of coastal environment, wetlands, lakes and rivers (clause 6a);
- b. public access to coasts, lakes and rivers (clause 6d);
- c. indigenous vegetation and habitat (clause 6c);
- d. cultural and traditional sites of Maori (clause 6e);
- e. customary rights (clause 6g);
- f. historic heritage (clause 6f);
- g. natural features and landscapes (clause 6b).

- 4.2 Focussing on clause 6b. It clearly considered features and landscapes to be different things. If it had meant small and large landscapes it would have had no need to use the term “features”.

- 4.3 If New Zealand’s highly valued and diverse geoheritage is to be protected using the RMA, as clearly was intended, then Clause 6b Outstanding Natural Features is the ONLY place where it fits and was originally intended to fit.

4.4 If geoheritage ONFs are to be required to be assessed using landscape values and criteria, the same logic requires that landscape criteria need to be used to also assess the importance of historic buildings, historic sites, Waahi Tapu, ecosystems, wetlands, Significant Natural Areas, archaeological sites and cultural sites to see whether they meet threshold for scheduling or protection under the RMA.

This is clearly a nonsense, as it is for geoheritage ONFs.

4.5 The NZ Coastal Policy Statement 1994 stated:

“Policy 1.1.3. It is a national priority to protect the following features,

(a) landscapes, seascapes and landforms, including:

(i) significant representative examples of each landform which provide the variety in each region;

(ii) visually or scientifically significant geological features;”

4.6 This clearly indicated in the early days that the protection of New Zealand’s geoheritage was a national priority. So what has changed?

4.7 The updated NZ Coastal Policy Statement 2010 did not retain this policy but also did not say it no longer recognised geoheritage protection (1.1.3 from the 1994 statement) as a priority. It unfortunately reflects the fact that neither GSNZ, nor any other body concerned about geoheritage protection, saw the need to make a submission on the new Coastal Policy Statement to remind the hearings panel of the value of our geoheritage and that this is the main reason why ONFs were originally included in the RMA. We never dreamt that the definition of an ONF might be changed to an extent that might be interpreted as excluding geoheritage.

4.8 We assert that being unaware of the downstream impacts on geoheritage protection, landscape architects in Boffa Miskell have mistakenly hijacked the mechanism (ONFs) established for protecting NZ’s geoheritage, by insisting on using and defending an exclusive landscape assessment methodology for all ONFs.

5. WHAT IS AN OUTSTANDING NATURAL FEATURE, ONF?

5.1 In short, our problem with the PWDP comes down to one thing. This is that the Waikato District Landscape Study has introduced a new and **restrictive definition** of an Outstanding Natural Feature that is NOT mandated by the RMA, and which does not appear to be supported by any subsequent Environment Court case law (which all refer to landscape assessment methodologies). It differs completely from what was originally

intended by the RMA when it was drafted (see Appendix 1) and shown by the 1994 Coastal Policy Statement.

- 5.2 The PWDP defines an Outstanding Natural Feature as one that is shown on the plan maps. The recommended ONFs that are shown on the plan maps are those that have been assessed by the **landscape assessment methodology** in the Boffa Miskell Landscape Study as meeting their threshold of Outstanding Natural Features **in all three** categories of assessment (two of them landscape categories).
- 5.3 In other district plans that have followed the modified Pigeon Bay assessment criteria, an ONF need not trigger a threshold in all three categories of criteria (biophysical, sensory, associative). The preferred approach is an overall judgement and a strong geoheritage assessment would suffice.
- 5.4 The consequences of accepting this new and exclusive definition of an ONF is that almost all outstanding natural geoheritage features within the Waikato District are excluded from the higher level of protection that would be expected from being recognised and scheduled as such. The only exceptions are a few geoheritage ONFs that coincidentally also have high landscape values under the sensory and associative criteria (e.g. Bridal Veil Falls, Mt Karioi, Waikato River delta and sand spit).
- 5.5 GSNZ made submissions in the late 1980s when the RMA was being prepared asking that geoheritage features be clearly included and carried over from existing legislation (see brief history in Appendix 1).
- 5.6 When the RMA was being drafted the term Outstanding Natural Feature was introduced primarily to encompass New Zealand's significant geological features and landforms. We know this from discussions with some of those involved at the time and from other major submitters and from how ONFs were treated in plans around NZ for the following 10-20 years.
- 5.7 Unfortunately, in their wisdom the RMA drafters did not provide a definition of what they meant by an Outstanding Natural Feature in the Act, although all of those involved in the exercise at the time were quite clear (see attached Appendix 1 which outlines this history).
- 5.8 In the first 20 years, or so, of RMA Policy Statements and District Plans, the lack of a precise definition of an ONF did not seem to matter, as the majority of Councils recognised and accepted the original intention of the RMA, that ONFs were primarily there to give a pathway for protection of New Zealand's diverse and irreplaceable geoheritage features (outstanding geological sites and landforms).

5.9 Many TLAs still use this original intended definition of an ONF in their Plans. As an example, we cite the present Auckland Unitary Plan which schedules and maps 254 ONFs, ALL of which are geological sites and landforms of outstanding geoh heritage value and have been assessed on these values alone. The Auckland Unitary Plan combined the ONF schedules of Auckland City, Waitakere City, North Shore City, Manukau City, Rodney District and northern Franklin District, all of which scheduled ONFs of only geoh heritage value. In the AUP, ONFs are defined as those that meet the geoh heritage criteria listed (as in our submission point 8.5).

5.10 During the AUP hearings process, Auckland Council signed a Joint Statement with GSNZ, who had suggested additional ONFs be included, that *“agreed that these further investigations, pending a future plan change, should be carried out at the earliest possible time”*.

5.11 As a second example, we cite the Northland Regional Policy Statement which schedules and maps 148 ONFs, ALL of which are geological sites and landforms of outstanding geoh heritage value and have been assessed on these values alone. They too, define an ONF as being one that meets the geoh heritage assessment criteria (as listed in our submission point 8.5).

5.12 As with the AUP, during the hearings for the Northland Regional Policy Statement, the commissioners recognised (from the GSNZ submission) that there were many ONFs in Northland that were not listed or scheduled. As a result they included the criteria for recognition of an ONF in the Policy Statement.

*“4.5.4. Method (4) Within two years of the Regional Policy Statement becoming operative the regional and district councils shall undertake a joint exercise to identify and implement the most cost effective and efficient process to map the physical extent of those **outstanding natural features** listed in Appendix 4, and include the resulting maps into appropriate district and regional plans.”*

“Explanation:

Method 4.5.4(4) recognises that there is some further work required in relation to outstanding natural features. Outstanding natural features have been identified using the Geopreservation Inventory for Northland as a basis (Inventory and Maps of Important Geological Sites and Landforms in the Northland Region; Kenny J. A. and Hayward B. W.; Geological Society of New Zealand 1996). However, not all sites identified in the inventory have been mapped by the Geological Society. Such sites where the spatial extent is not defined are not identified on the Regional Policy Statement Maps given the uncertainty this creates.

This is an acknowledged gap and Method 4.5.4(4) intends to remedy this by progressively providing maps of those features that meet the criteria for outstanding natural features or warrant further investigation. The features that require further assessment and mapping are listed in Appendix 4.”

- 5.13 In our considered opinion, it was clear from the outset in the RMA that ONL referred to landscape that is appropriately assessed by landscape criteria and ONF referred primarily to geoheritage (geological, landform) features that are appropriately assessed by geoheritage criteria, and until recently this was the case.
- 5.14 There is no directive in the RMA or as far as we can read in case law that supports the redefinition of ONFs to be restricted to “small landscape features”. Case law talks about using modified Pigeon Bay criteria for “assessing landscape” values of landscapes NOT for assessing the geoheritage values of ONF.
- 5.15 We acknowledge that on face value Policy 15(c) of the NZ Coastal Policy Statement does suggest that outstanding natural features and outstanding natural landscapes of the coastal environment be identified and assessed using criteria that are primarily related to landscape values and less relevant to the geoheritage features.
- 5.16 Geoheritage protection was mistakenly overlooked by the NZ Coastal Policy Statement as the debate focussed on what was outstanding natural landscape and how that should be assessed.
- 5.17 If NZCPS Policy 15(c) is interpreted pedantically, an unintended consequence is that geoheritage ONFs are no longer able to be protected in the coastal environment. Some TLAs (including the PWDP) have taken this strict interpretation even further and applied it over their whole land district.
- 5.18 Some TLA planners (e.g. Auckland, Northland, Whangarei, Far North) with a wider perspective, have recognised this unintended consequence of strict interpretation of NZCPS Policy 15(c) and have continued to define and assess ONFs as geoheritage features.
- 5.19 As a result of the wording in Policy 15(c), the NZ Coastal Policy Statement has many places where it is ambiguous and ONFs are confused with ONLs. Landscape assessment is often referred to, but geoheritage assessment criteria are conspicuously absent, although they were well developed by 2010.
- 5.20 This exclusive focus on landscape when Policy 15(c) was being considered is clearly pointed out by the DoC Guidance note on the NZCPS 2010:

At the time of the review, the ‘amended Pigeon Bay criteria’ were generally accepted by the Board and many submitters as the starting point for most landscape assessments, with the Court acknowledging that the list of criteria should not be frozen, with scope to be improved with further use and understanding, especially of some of the issues we now explore. These criteria provide the basis for the matters listed in Policy 15(c), and are outlined in Table 1 below.

5.21 The DoC Guidance note on the NZCPS 2010 also points out under the section – What are natural features and natural landscapes of the coastal environment?:

Natural features of the coastal environment include those resources that are the result of natural processes, particularly those reflecting a particular geology, topography, geomorphology, hydrology, ecology, or other physical attribute that creates a natural feature or combination of natural features.

5.22 We acknowledge that in recent years some landscape architects and members of the legal fraternity have been confused about what is an ONL (landscape) and an ONF (primarily a geoheritage feature) because at times some large landform ONFs have also been assessed as qualifying as small ONLs. The term ONFL has been introduced and promoted by some landscape architects and planners, by which they appear to be referring to large and small landscapes that have the same provisions in a Plan and excluding geoheritage features that should have different provisions as we argue.

5.23 The term ONFL is not mentioned nor defined in the RMA nor the NZ Coastal Policy Statement. Its use in a number of recent District Plans is always accompanied by assessment criteria that relate primarily to landscape values. We therefore interpret ONFL to refer to large and small landscapes and that geoheritage ONFs are not included.

5.24 Consequent upon the introduction of the novel ONFL idea, some landscape architects and planners seem to believe that landscape assessment and identification of ONFL meets their obligations to protect Outstanding Natural Features under RMA Clause 6(b).

5.25 Identifying and assessing ONFL using landscape assessment criteria does not satisfy the requirements of the RMA, as this overlooks the fact that ONFs were introduced to primarily provide for the protection of New Zealand’s geoheritage and this has not been rescinded nor rewritten.

5.26 We submit that strictly speaking, ALL the ONFs proposed in the PWDC are landscapes and should be classified as ONL and possibly be divided into two categories (as has been done in other plans for ONFs = geoheritage), possibly with different policies and rules relevant to their size and robustness/fragility:

a. Category 1. Large ONLs

b. Category 2. Small ONLs

5.27 Assuming that the large and small landscape features in the PWDP are recognised as ONL (as in 5.12) then the existing geoheritage ONFs in the operative Waikato District Plan should be retained as ONF, and the original intended geoheritage definition of an ONF could be inserted with assessment criteria (see our submission point 8.5 below) and additional policies and rules (see submission point 8.4 below), similar to those that are considered lawful and operative in the District Plans to the north.

6. WAIKATO REGIONAL POLICY STATEMENT DIRECTION ON ONFs

6.1 The Regional Policy Statement is intended to direct and guide the preparation of district plans which implement the policies in the Regional Statement.

6.2 WRPS “*Objective 3.20 Outstanding natural features and landscapes*”

The values of outstanding natural features and landscapes are identified and protected from inappropriate subdivision use and development.”

We note separate mention of natural landscapes and natural features as in RMA Clause 6(b).

6.3 WRPS Policy 12.1 Outstanding natural features and landscape

*“Identified values and characteristics of outstanding natural features and landscapes (including seascapes) of **regional and district significance** are protected from adverse effects, **including cumulative effects**, arising from inappropriate subdivision, use and development.”* [our bolding]

*“12.1.2 Identify outstanding natural features and landscapes of significance at a district level. Waikato Regional Council will encourage territorial authorities to undertake a districtwide assessment of outstanding natural features and landscapes of **district significance**. The approach summarised in section 12B (Table 12-2) should be used as the basis of any new assessment.”*

6.4 WRPS Section 12B:

*“Section 12B outlines the approach that should be followed **when assessing landscapes**. It includes a definition of ‘landscape’ and ‘feature’, the attributes and typical factors to be considered, the assessment process, and the specific threshold tests for ‘outstanding natural features and landscapes’.”*

“12B Landscape assessment approach

The following section outlines the approach to be followed in assessing landscapes. Such an approach should be applied to the identification of ‘outstanding natural features and landscapes’ and also to ‘seascapes’ or landscapes with other specific amenity value.

In applying the approach continuing refinements in best practice, for instance as a result of future research or professional guides, should be taken into consideration.

Definition of ‘Landscape’ and ‘Feature’

‘Landscape is the cumulative expression of natural and cultural features, patterns and processes in a geographical area, including human perceptions and associations’ (New Zealand Institute of Landscape Architects Best Practice Note 10.1, November 2010). A feature is a discrete part of a landscape.

By way of further explanation:

- *Landscape is a distinct geographical area;*
- *Landscape involves both the physical attributes of the area and people’s appreciation of such attributes; and*
- *Landscape appreciation entails scientific understanding, aesthetic perceptions, and people’s associations with an area.”*

“Outstanding Natural Features and Landscape Threshold Tests

A further stage is required to identify outstanding natural features and landscapes, which must be both ‘natural’ and pass an ‘outstanding’ threshold.

- *‘Outstanding’ means ‘conspicuous, eminent, excellent, remarkable’.*
- *‘Natural’ means a landscape predominantly characterised by natural elements and processes (for example landform, natural vegetation and/or water). ‘Natural’ can include managed rural landscapes (including pastoral landscapes) where natural elements and processes are dominant.”*

6.5 The above sections in 12.1 and 12B treat landscapes and features separately. The only definition provided for a feature is that ***“it is a discrete part of a landscape”***.

6.6 A strict interpretation of this definition would be that a discrete part of a landscape is not landscape itself and should not be required to have the values of a landscape, be assessed by landscape assessment methods nor meet the threshold level in all categories of landscape assessment, as proposed and defended by Boffa Miskell.

6.7 Table 12-2 (mentioned in policy 12.1) is headed ***“Typical factors to consider where assessing landscapes”*** and is therefore not relevant to outstanding natural features.

6.8 Policy 12.3 Maintain and enhance areas of amenity value

“Areas of amenity value are identified, and those values are maintained and enhanced.

These may include:

a) areas within the coastal environment and along inland water bodies;

b) scenic, scientific, recreational or historic areas;

c) areas of spiritual or cultural significance;

d) other landscapes or seascapes or natural features; and

e) areas adjacent to outstanding natural landscapes and features that are visible from a road or other public place.”

6.9 PWDP introduces the category of Significant Amenity Landscapes, SAL, presumably in response to policy 12.3 of the WRPS. SALs only encompasses a small portion of the proposed area types with amenity value and since they are assessed by landscape assessment criteria they exclude natural features, scientific areas and areas adjacent to outstanding natural features that are visible from public places, all of which are listed in 12.3 (above).

6.10 WRPS 12.3 d) (above) states that areas of amenity value may include “landscapes or seascapes **or** natural features”. This again emphasises the confusion in the minds of planners – in this instance the WRPS clearly indicates that natural features are NOT considered to be landscapes or certainly that not all natural features are considered to be landscapes.

6.11 The policy “to maintain and enhance” areas of amenity value rather than “protect from the adverse effects” clearly indicates that SALs or other amenity areas are considered to be lesser value to ONLs and ONFs.

6.12 The term ONFL is used in the heading for Table 12A Outstanding Natural Features and Landscapes (ONFL) of regional significance. This table lists and maps thirteen numbered areas, all of which are large landscapes or in two instances smaller geoheritage features (Waiotapu and Horohoro escarpment). None of the identified “ONFL” could be described as “small landscapes”. Several of the “ONFL” (e.g. Lake Taupo, Mt Pirongia, Mt Maungatauturi) are clearly both large outstanding landscapes that pass the landscape assessment threshold (=ONL) and large outstanding natural features that would pass the geoheritage criteria threshold (=ONF).

6.13 Thus we assert that the Waikato Regional Policy Statement gives no direction that ONFs should be considered as “small landscape features” nor that geoheritage features should be **excluded** from ONFs because they do not meet the Boffa Miskell threshold for outstanding landscapes.

- 6.14 To further emphasise point 6.13, we know that the Waitomo District planners have adopted the geoheritage criteria for assessing ONFs in their proposed new District Plan and obtained the blessing of the Waikato Regional Council planners who examined the methodology before agreeing. My understanding is that 76 potential ONFs (all geoheritage features) are proposed and a further 30 (mostly cave sites) are proposed to be retained in the karst overlay for cave protection (similar to that already operative), presumably as a special geoheritage category of amenity area.
- 6.15 From the above it is clear that the Waikato Regional Policy Statement directs that ONFs be identified and protected as outlined in RMA 6(b) and does NOT require or direct that they be defined or assessed by landscape assessment criteria.

7. WHAT IS THE GEOHERITAGE OF WAIKATO DISTRICT?

- 7.1 Each region and district in New Zealand has its own unique set of Outstanding Natural Features (geoheritage) that document their specific history but also contribute to our knowledge of the history of the whole country and its biota. As a result some sites have been ranked of international, national and regional significance in the NZ Geopreservation Inventory because of their different levels of contribution to the global knowledge and geoheritage.
- 7.2 Quite commonly however, a local district's population may value their ONFs (geoheritage) of Regional and District importance as highly as that of International and National Importance. The WRPS directs that ONLs and ONFs of regional and district significance be identified.
- 7.3 There are a number of components to the geoheritage of Waikato District, as noted in the Franklin Section of the Operative District Plan and in Boffa Miskell's Waikato District Landscape Study (p 20-22). The different elements include:
- a) the oldest rocks (sometimes referred to as basement greywacke) of Triassic and Jurassic age (250-140 million years old), with several national and regionally important geological and fossil sites [Franklin District ONFs – Daff Rd fossil plants, Huriwai fossil plants, Port Waikato-Tuakau Rd Jurassic stratigraphic type section for NZ; Moeweka Quarry and Opuatia Cliffs marine fossils of Jurassic age]. These rocks underlie the whole of the District but in most places they lie at some depth below the surface. In the North Island these less deformed, fossil-bearing strata only outcrop at the surface in a wide coastal belt parallel the coast from Port Waikato to Kawhia.

b) the overlying Cenozoic sedimentary rocks sit on the Great New Zealand Unconformity that was eroded into the older greywacke rocks between 60 and 35 million years ago. These Cenozoic sedimentary cover rocks comprise a sequence from terrestrial coal measures through marine-deposited limestones, to sandstone and mudstone, that were deposited as the region was subsiding between 40 and 15 million years ago. They record a considerable amount of detail about the paleogeography of the district and of the history of the onset of the collision forces between the Australian and Pacific Plates that resulted in the rapid subsidence of some areas and uplift of land close by. These younger sedimentary rocks occur at the surface and form much of the hilly country throughout the Waikato District south and mostly west of the Waikato River. They include a few nationally significant and a number of sites of regional and district significance. We have suggested a few of the more outstanding sections that we believe will exceed the threshold for outstanding geoheritage features (Kaawa Creek-Ngatutura section ONF; Waiwiri Beach unconformity and basal Waitemata Group; Huriwai-Waikawau coastal section and Great NZ unconformity; Puketoka conglomerate; Gibsons Beach unconformity and fossil karst; Dunphail Bluffs Oligocene sandstone).

c) the older volcanoes and eroded volcanic rocks of the southern part of the Waikato District that erupted in the Pliocene-early Pleistocene between 5 and 2 million years ago. We have identified six geoheritage features in this category that undoubtedly surpass the threshold for outstanding (large Karioi Volcano; Bridal Veil Falls spectacular columnar jointing; Taranaki Pt volcanic rock exposures; Papanui Pt volcanic rock exposures; Te Toto Gorge lava and pyroclastic deposit sequence; Ngatutura Pt eruptive centre).

d) the fluvial and coastal landform sites, particularly the Waikato River but also a number of spectacular coastal landforms, some of which are picked up as parts of Outstanding Landscapes by the Boffa Miskell report, but others are not. [Our suggestions include Waikato delta and Port Waikato sand spit; Ngatutura Pt sea stacks; Carters Beach shore platform; Bridal veil Falls; Taupiri antecedent gorge).

e) the rare and amazing limestone karst and cave landforms inland from the coast in just a few places between Aotea Harbour and Port Waikato, which include nationally and regionally significant sites (mostly overlooked by the Boffa Miskell report). We rate protection of this aspect of the district's geoheritage to be one of the two most urgent issues in 2020. {Sites nominated are Ngapuriri Natural Arch and Waikawau karst;

Raglan coastal karst; Taranaki Pt coastal karst; Lake Disappear and adjacent karst; Helectite Hole/Old Mountain Rd caves and karst; Nikau Cave and karst).

f) the volcanic landforms of the relatively young South Auckland Volcanic Field (see Appendix 3). **12** of the ~44 volcanoes in the northern Waikato District are rated by us as Outstanding at the District, Regional or National level (but only two are included in the Boffa Miskell Landscape Study and are there downgraded from ONF to SAL). We rate the need for increased protection of the volcanoes of the Waikato District's share of the South Auckland Volcanic Field to be one of the **two most urgent issues in 2020 that Waikato District MUST** address if it is to comply with RMA Clause 6b. For this reason we have prepared a special **Appendix 2** to this evidence that outlines **the geoheritage of the South Auckland Volcanic Field**. We wish to expand on this Appendix in detail during the hearing.

8. SECTION 42A REPORT AND RECOMMENDATIONS ON GSNZ SUBMISISONS – GENERAL

- 8.1 We have read Jane Macartney's Report 42A with her recommendations of response to the submissions with respect to Hearing 21 B Landscapes.
- 8.2 We have also read the Response to the GSNZ Submission prepared by Rebecca Ryder of consultants Boffa Miskell.
- 8.3 Both reports recommend that by far the majority of our main submission points be rejected. The only concession is to agree to recommend schedules of ONF, ONL etc. with skeletal documentation of the values of sites.
- 8.4 We **DISAGREE** with the recommendations to reject our submission points because we argue they are contrary to the RMA Section 6(b) that states that "the protection of outstanding natural features and landscapes from inappropriate subdivision, use and development, is a matter of national importance." See detailed discussion above.
- 8.5 By supporting the Boffa Miskell methodology that results in the **REMOVAL** of **ALL** existing ONF with geoheritage values from the operative Waikato District Plan, Franklin Section is acting contrary to the RMA Section 6(b).
- 8.6 By refusing to consider the suggested additional geoheritage sites as potential ONFs makes a mockery of the present submission process for the PWDP. These sites have been assessed as being of outstanding geoheritage value by members of the New Zealand geoscience community for many decades. The Boffa Miskell report, prepared

by a landscape architect dismisses them as not reaching the threshold for outstanding because she uses inappropriate criteria designed for assessing landscape and NOT criteria designed for assessing the geoheritage values of Outstanding Natural Features.

8.7 See our detailed responses to our submission points 8.1-8.5 below.

9. GSNZ SUBMISSION POINT 8.1

“Add a new schedule listing scheduled ONFs in the District.”

9.1 WDC 42A report recommendation: Accept.

9.2 Our request was part of submission suite that was intended to ensure that the Geoheritage ONFs of the Waikato District were given the protection that the RMA Clause 6(b) requires them to have.

9.3 We submit that adding a schedule of the proposed small landscape ONFLs, on its own, achieves very little, as the information to be summarised in the schedule for these landscape sites is already provided in the Landscape Study Report.

9.4 The purpose of the new schedule was to provide a summary of the heritage values of the Geoheritage ONFs to be protected and to classify each site into a category for management rules, as done by the Auckland Unitary Plan and Whangarei District Plan for example (see later).

9.5 It is ironic that the Section 42A Report selects as an example of a list of scheduled ONFs and their values from the AUP, which contrary to the PWDP defines ONF as geological sites and landforms assessed by Unitary Plan Criteria (=geoheritage criteria) **just as we are requesting:**

305. The following excerpts from Schedules 6, 7 and 8 of the Auckland Unitary Plan provide examples for how such an approach could be incorporated into the PWDP:

Schedule 6 Outstanding Natural Features Overlay Schedule [rcp/dp]

Introduction

The factors in [B4.2.2\(4\)](#) have been used to determine the features included in Schedule 6 Outstanding Natural Features Overlay Schedule, and will be used to assess proposed future additions to the schedule.

ID	Name	Location	Site type	Description	Unitary Plan criteria
2	Algies Beach melange	Algies Bay	E	This site is one of the best examples of an exposure of the contact between Northland Allocthon and Miocene Waitemata Group rocks.	a, b, g

10. GSNZ SUBMISSION POINT 8.2

“Add a new schedule to section D entitled Important Geological Sites and Landforms” (WDC interpretation) “and include the sites listed in the Franklin Section of the Waikato District Plan Part 5, schedule 5B”

10.1 WDC 42A report recommendation: Reject.

10.2 It should be noted that the WDC summary of our submission **DIFFERS** from what we requested. We asked that:

*“We request that the schedule of ONFs (as proposed in our submission point 8.1) **INCLUDE** Schedule 5B from the Franklin Section of the Operative Waikato District Plan – Important Geological Sites and Landforms listed in the NZ Geopreservation Inventory containing sites of National Importance:”*

10.3 WDC 42A Report section 299 addresses our submission point 8.2 and states:

“I can find no explicit directive in the WRPS that requires Council to schedule geopreservation sites on the basis of their geological value alone.” See Section 6 of our evidence (above).

10.4 We agree that the WRPS does fail in not providing the definition of an ONF, which can be sheeted back to the original RMA not providing a definition because the policy makers believed it was quite clear and obvious that they were NOT referring to “small landscape features” (see discussion above and in the GSNZ Best Practice Guide for ONFs in Appendix 1).

10.5 We note that the WRPS, and the RMA itself, make no mention anywhere of Significant Amenity Landscapes (SALs) – In Policy 12.3 they refer to **Areas of Amenity Value** yet that has not prevented WDCouncil accepting Boffa Miskell’s recommendation to introduce such a category and develop policies and rules for sites assessed to be of this status based on landscape criteria and not on other criteria appropriate for the various types of area mentioned in WRPS 12.3.

10.6 Thus it is **inconsistent** for WDC to accept on the one hand an additional new category of landscape for protection (that it is not specifically directed to do in the WRPS) and refuse to accept an existing category of ONF (already in the operative Waikato District Plan, Franklin Section and RMA) because it is not specifically directed to do so in the WRPS.

10.7 The Operative Waikato District Plan clearly states that the Geological sites and landforms listed in Schedule 5B are Outstanding Natural Features:

“5.2.3 Methods of Implementation of Policies

Policy 1:

Outstanding natural features are listed in the Schedules to Part 5.

Outstanding natural features shall include:

- 1. Sites listed under the RAMSAR Convention (a convention on wetlands of international importance);*
- 2. ‘Sites of Special Wildlife Interest’ ranked as having outstanding, high, moderate-high or moderate wildlife value;*
- 3. Recommended Areas for Protection under the Protected Natural Areas Programme;*
- 4. Geological sites and landforms listed as being of national importance in the New Zealand Geopreservation Inventory;”*

10.8 The nine sites are (as in Schedule 5B of the operative plan):

- “2. Daff Road Jurassic Plant Beds. In farm quarry, 400 metres south of farm airstrip, 2 km south of end of Daff Road*
- 3. Kaawa Creek - Ngatutura Bay Section. In coastal cliffs for 1 kilometre south of Kaawa Creek mouth*
- 4. Kellyville Tuff Ring. East of North Island Main Trunk Railway at Mercer village.*
- 5. Moeweka Quarry Jurassic Fauna. Quarry just north of Ponganui Road, Wairamarama*
- 6. Onewhero Tuff Ring. Bounds Kaipo Flats approximately 1-2 kilometres north-west of Onewhero village*
- 7. Opuatia Cliff Jurassic Fauna. North of Ponganui Road, on Opuatia Stream, Wairamarama.*
- 8. Port Waikato To Tuakau Bridge Road Jurassic Section. South side of Waikato River, section alongside Port Waikato-Tuakau Bridge Road between points 0.5 kilometres east of Daff Road and 2 kilometres west of Daff Road.*
- 9. Pukekawa Iii Scoria Cone. Adjacent and to the west of Highway 22 just north-west of Pukekawa village.*
- 10. Huriwai Beach Jurassic Plant Beds.”*

10.9 Note these nine listed sites were not proposed by GSNZ but were selected by Franklin Council officers back in the day, based on their odd criterion that they would schedule sites rated as of National Importance or above in the Geopreservation Inventory.

10.10 GSNZ does not necessarily consider that all the above sites are the highest priority for being protected from adverse effects at this time, but we do agree that all would qualify as Geoheritage ONF using the Best practice assessment criteria for ONFs.

10.11 We note that all these nine geoheritage sites currently are scheduled as ONFs and have been for 20 years. We see no valid reason why they should now be removed from ONF status or downgraded to this SAL category (based on Boffa Miskell’s novel definition to restrict ONFs to small landscape features that must meet their landscape assessment criteria).

10.12 It should be noted that all the ONF from the former Franklin District Plan that fell within the new Auckland Unitary Plan area, have been retained as ONF, mapped and provided with an assessment of their values in the AUP ONF schedule. It is quite inconsistent that they are to be deleted from ONF protection because they happen to be on the wrong side of the political boundary and south of the border they do not qualify as ONF.

10.13 WDC Report 42A (section 299) suggests that retaining these nine ONF would be unfair to the landowners as they have not been advertised in the PWDP and they have not had a chance to submit upon them. We disagree for the following reasons:

a. These nine sites are currently ONF and have been for more than 20 years and all landowners should be aware of this.

b. The fact that these nine sites were to be stripped of their ONF status is not mentioned anywhere in the PWDP and it was only our vigilance that noted the subterfuge being used to do so. Indeed many requests by GSNZ over the past 5 years to determine whether they were proposed to be retained or not, never received a satisfactory response from WDC officers that indicated that it was proposed to delete them. Even as late as mid 2018 we received a tentative assurance that were to be retained from Jane Macartney (see Appendix 4).

c. Our submission to retain these nine sites as ONF status was advertised and it is not apparent that any of the landowners have further submitted in opposition to our submission.

d. We submit that it is not apparent that any of the landowners were ever aware that the PWDP was proposing to remove ONF status from these features.

10.14 In several places it is suggested by WDC that the lack of maps of these nine sites means there is a lack of certainty of where they are and that the affected landowners should have been able to see this.

10.15 We absolutely agree that maps showing the extent of ONF should be in the District Plan. We note however that they have been missing for the past 20 years and this has not prevented the Council administering the ONF protections and requiring Resource Consent applications to assess the impact of proposals on the geoheritage values of the ONFs. A number of applicants have been referred to GSNZ by Council in the past to comment upon the potential impacts on these values (see examples in Appendix 4).

10.16 The Franklin Section of the District Plan which lists these nine ONF is headed: ***“Schedule 5B: Important Geological Sites and Landforms listed in the New Zealand***

Geopreservation Inventory. (Note: These sites/areas are not identified on the *planning maps*).”

10.17 Franklin and Waikato District planners, as well as at least one Resource Consent Hearings Committee (on a Pukekawa Scoria Cone application), have used this reference to the NZ Geopreservation Inventory to indicate that the maps of these sites that have been publicly available within the inventory since 1996 provide the boundaries for these ONF. We agree that this is not ideal, but the information on these sites and their localities has been publicly available to WDC for at least 20 years. We know at least one printed copy of this Inventory has been held and used by WDC planners in the past.

10.18 The Operative District Plan, Franklin Section states:

“5.2.3 District Council staff do not have the expertise to identify the significance and vulnerability of many natural features or assess their condition. The Council therefore needs to work in conjunction with agencies that have such expertise.”

10.19 WDC planners clearly have not taken any notice of the above clause with respect to the above existing ONFs with Geoheritage values. The Council has contracted Boffa Miskell to undertake a Waikato District Landscape Study. Perhaps it could be argued that this was in the mistaken belief that a landscape study would also consider the geoheritage protection, in spite of submissions and letters from GSNZ over the years that clearly showed that it did not (see examples in Appendix 4).

10.20 In their defence Boffa Miskell could argue that they were not requested to assess the geoheritage ONFs of the District, and they could not do so adequately as they do not list on their website that they have any expertise in Geoheritage assessment. This clearly shows through in their recommendations that essentially ignore this part of Waikato District’s natural heritage.

10.21 From experience we know that it would not have taken more than a day’s work for the publicly available information on the geoheritage values of these nine sites to be assembled by an experienced geoscientist/geoheritage expert, to download the digital maps of each from the web and refine them against the legal boundaries for appropriate use in the District Plan maps, and to document an assessment of their values using the Geoheritage criteria for ONF recognition and to assign them to one of the vulnerability categories for activity management (see later).

10.22 While we argue that it is **not prejudicial** to the landowners to retain the ONF status of these nine sites in the Waikato District Plan, we suggest that it might be fair to give

owners the opportunity to submit on and discuss newly prepared planning maps (based largely on those that have applied for 20 years) that clearly show the proposed boundaries with respect to their land.

10.23 This is an unfortunate situation. but in our opinion it could have been avoided if WDC staff had followed the operative District Plan Franklin Section clause 5.2.3 (above).

11. GSNZ SUBMISSION POINT 8.3

“Add the following additional outstanding Natural Features (i.e. geological sites and landforms) as recorded in the NZ Geopreservation Inventory be added to the new Schedule of ONFs:

- 1. Port Waikato sandspit*
- 2. Ngapuriri natural arch and surrounding karst*
- 3. Huriwai-Waikawau coastal section*
- 4. Waiwiri Beach unconformity and basal Waitemata group*
- 5. Pukeotahinga scoria cone*
- 6. Onewhero scoria cone*
- 7. Kauri Rd scoria cone*
- 8. Onepoto volcanic cone*
- 9. Te Kohanga tuff ring*
- 10. Rasmussen Rd tuff ring*
- 11. Waiuku volcanic cone*
- 12. Pokeno scoria cone*
- 13. Serpell Rd tuff ring*
- 14. Puketoka conglomerate*
- 15. Waikorea hot springs*
- 16. Gibsons Beach unconformity and fossil karst*
- 17. Taupiri Gorge*
- 18. Dunphail Bluffs Oligocene sandstone*
- 19. Waingaro hot springs*
- 20. Carters Beach shore platforms*
- 21. Raglan coastal karst*
- 22. Te Toto Gorge lava and pyroclastic sequence*
- 23. Mt Karioi*
- 24. Papanui Pt volcanics*
- 25. Bridal Veil Falls columnar jointed basalt*
- 26. Lake Disappear blind valley*
- 27. Lake Disappear karst*
- 28. Taranaki Pt karst*
- 29. Taranaki Pt volcanics*
- 30. Aotea dune field*
- 31. Helectite Hole karst”*

11.1 WDC 42A report recommendation: **Accept in part:** add “only the unmodified part of the Port Waikato Sandspit to the proposed Waikato River Delta ONF”. **Reject all the other 30 suggestions** because “*Boffa Miskell does not consider that all the geological/sites/landforms listed by the Geoscience Society of NZ satisfy the criteria for ONF*”.

11.2 GSNZ clearly finds this recommendation as quite unacceptable. There are two parts to address in response to this recommendations and we do so here. Part 1. Boffa Miskell’s assessment of the proposed sites; and Part 2. The inadequacy of the submission process to be able to address ANY suggested additional ONF in a way that is not prejudicial to landowners concerned.

PART 1. Boffa Miskell's assessments

11.3 The minor concession recommended to add the unmodified portion of the dynamic Port Waikato Sandspit to an ONF is accepted, but leaving out part of this Outstanding Natural Feature (Geoheritage) is quite illogical as it is the whole feature that has outstanding natural landform value not just part of it.

11.4 We contend that Boffa Miskell should not have agreed to attempt to assess the values of the suggested sites as potential ONFs as they do not claim to have geoscience/geoheritage expertise.

11.5 Boffa Miskell wrongly used Landscape assessment criteria to assess the values of these suggested geoheritage ONFs and therefore not surprisingly concluded that most “Do not qualify as ONF. Sensory/Associative Values.” We have to agree that most probably do not reach the threshold using these latter two landscape assessment criteria, but we argue that some clearly would (e.g. Appendix 3: Ngapuriri natural arch and karst; Raglan coastal karst; Taranaki Pt karst), which suggests to us they have not fully considered the values or unaware of them.

11.6 WDC Report 42A section 143 states:

143. In my opinion, for other geopreservation sites not identified in the PWDP to be of real value in a statutory sense, they need to be accurately mapped so that there is certainty as to their extent and therefore the application of rules with an objective and policy framework. This is particularly relevant in the case of some geopreservation sites (such as volcanic tuff rings) that are no longer completely intact.

11.7 This is a lame excuse. These sites ARE accurately mapped and have been in the public domain since 1966. We submit that the available maps were made to show the extent of the features and may need some minor refinements wrt legal boundaries etc to make them suitable for scheduling, but this need not have been an onerous task for someone with the appropriate experience.

11.8 Rather than provide a huge dossier and map on each proposed site in our original submission, we stated that the data and maps of their extent were in the publicly available NZ Geopreservation Inventory. A map derived by Boffa Miskell showing the distribution of sites in the NZ Geopreservation Inventory is presented in their Landscape Study Report (p. 21) and therefore Boffa Miskell were aware of all this information's existence.

11.9 In their assessment of each of our suggested additional ONF, Boffa Miskell often state that the suggested site is in or partly within or partly overlaps with land that has been

classified as SAL, ONF, HNC, SNA, within the coastal environment etc. Thus Boffa Miskell and the Council are well aware of the publicly available maps and documentation produced long ago by GSNZ in the NZ Geopreservation Inventory (<https://services.main.net.nz/geopreservation/>) that show the extent of these sites and cannot use the excuse that such maps and information was not provided or available.

11.10 The fact that many of our suggested ONF sites are already within or partly within a wide variety of categories in the PWDP is heartening BUT does not remove or lessen the need to identify them as having outstanding geoheritage values that needs to be flagged and considered in RMA related decision making.

11.11 As one example: Policies for many landscape and ecosystem categories would actively support revegetation of these areas, whereas this could have an adverse effect on the values of some of the smaller geoheritage ONFs that rely on exposure of the natural rock being retained.

11.12 As a second example: the landform shapes of some of the suggested volcano ONFs would be better appreciated if they remained in pastoral farmland rather than being revegetated. That does not mean we would oppose revegetation but it does mean that its impact on the geoheritage values should be considered along with all other factors. To do this the high geoheritage values need to be indicated through scheduling as an ONF separate from lying within areas identified for protection for other reasons.

11.13 For these and other reasons the planner needs to have access to all the information on the various values of the land or feature when assessing the potential impacts of various proposed major new activities.

11.14 WDC Report 42A, section 144 states

144. I consider that focused engagement with landowners is a necessary prerequisite for this map identification, as they would be the most affected by this process. However, this also raises a more general question as to whether geopreservation sites should be scheduled in the PWDP for their geoscience value if they do not attain 'outstanding' status in terms of section 6(b) of the RMA.

11.15 We find this last sentence as insulting to the intelligence of the New Zealand geoscience community. The New Zealand geoscience community has donated tens of thousands of voluntary hours over the past 35 years to the identification, documentation and mapping of geoscience sites that they considered significant enough for long-term protection (see Appendix 2). We do not deserve to have our considered fact-based assessments dismissed in such an off-hand way. As shown many times in our evidence above and acknowledged by the Boffa Miskell response: the proposed additional ONFs

have not been assessed using criteria appropriate for assessing geoheritage as originally intended in the RMA 6(b). Our suggested additional ONF are of no lesser significance than the 400 plus geoheritage sites identified as ONF in Auckland and Northland plans. Point 144 above is flatly rejected by GSNZ.

- 11.16 We acknowledge that we cannot foresee any looming or immediate threats to the geoheritage values of many of our suggested ONFs in the foreseeable future, but experience has shown us that it is often the unforeseen proposals that pose the greatest threats to their values. Often these proposals are well advanced before they become publicly known about, by which time it is hard to have them modified to avoid the adverse effects on certain values that the project development team were unaware of.
- 11.17 We cite the 2019 Foulden Maar debacle in Otago: If the Regional Policy Statement or the Dunedin City Plan had identified and scheduled geoheritage sites as ONF, this remarkable fossil locality in diatomite would not have been targeted by an overseas company for mining as a food stock additive to be exported to SE Asia and the company would not have declared bankruptcy and lost many millions of dollars when it became clear that resource consent would not be forthcoming because of its geoheritage values. Local Councillors were incredulous to discover that such outstanding features existed in their district and yet had no protection as ONFs in their District Plan. The Council has announced that they are looking to purchase this pastoral farm containing the diatomite quarry for many millions of dollars – a situation that would not have been needed if only it and similar sites had been scheduled as ONF in their district. This site had been identified and mapped in the NZ Geopreservation Inventory as a site of geological significance since 1986, but it was not seen to be under threat of complete removal by a major quarrying operation. Ongoing small-scale quarrying had been seen as beneficial to the site’s geoheritage values.
- 11.18 We do not foresee such a situation here in Waikato District, but something similar could happen. As one example: an energy company may develop a plan for a wind farm with sites located on the tops of a number of prominent ridges and hills. If not identified as ONF volcanoes in the district plan, vast resources could be expended in planning before the local community and others realised the damage that could be caused to these volcanoes not just by the siting of the wind generator but more by the earthworks required for its platform and to get the tower and generator up the hill and to service it. This is just a hypothetical, but not unrealistic, example of why it is important to identify geoheritage ONFs and show their extent and document their values in District Plans.

- 11.19 As a second example: Farmers in parts of the District might see the great benefits of storing water for irrigation during dry summer months and propose the construction of a dam with consequent flooding of a valley. If not identified and mapped as an ONF to signal the high geoh heritage values of say the Waikawau Karst area (suggested as an additional ONF by us and used in filming of Lord of the Rings) plans could be well advanced before becoming publicly known and groundswell opposition to drowning the national important and magical karst in this particular valley might result in planning to have to start again for another less valued site.
- 11.20 The Franklin District Plan chose only to include sites that had been ranked as of nationally or internationally significant for their geoh heritage values. There are many other sites that were not on the original Franklin District Council ONF Schedule but are potentially of Regional and District significance as Outstanding Natural Features based on their geoh heritage values and that the WRPS directs should be identified and scheduled as ONF (of regional and district significance). There are also additional Nationally significant geoh heritage sites in parts of Waikato District that were south of Franklin District and also definitely need to be scheduled as ONF (see Appendix 2).
- 11.21 The sites suggested by us in our submission point 8.3 are the GSNZ's initial assessment of those that would definitely exceed the standard threshold for qualifying as Outstanding Natural Features (as per GSNZ's Best Practice Guide for ONF identification and assessment – Appendix 1) of district significance. There are many other sites in the NZ Geopreservation Inventory that might, upon assessment, also exceed the district level threshold, as indicated by the number of ONFs recognised or proposed in districts of similar size to yours – e.g. Far North District, Whangarei District, Kaipara District, Auckland City, Waitomo District, Tasman District.
- 11.22 We provide an abbreviated response to the Boffa Miskell assessments of each of our suggested additional ONF in Appendices 2 and 3.

PART 2 Inadequacy of the submission process when suggesting ONF additions

- 11.23 The process of advertising a proposed District Plan for submissions and then further submissions is not suited to dealing with submissions where sites of clear ONF status have been overlooked/not considered for inclusion in the plan. Adding additional ONF into the plan is usually dismissed as being prejudicial to the private landowners who do not have adequate opportunity to be informed and to consider the implications, however major or minor they may be.

- 11.24 In our experience, faced with the same situation some councils have agreed to the addition of sites where they occur on public land and the management agency does not oppose such a process.
- 11.25 In other situations similar to this (e.g. AUP, Northland Regional Council), the Council concerned has recognised the failings of the process and the gravity of the omissions and added a clause into the District Plan that outlines a Plan Change process that will occur to consider, document, assess and map and then advertise future geoheritage ONFs within a 2-3 year time frame.
- 11.26 We reiterate that we do not believe WDC has followed its own Operative District Plan Franklin Section 5.2.3 (cited earlier) in obtaining appropriate expert advice on the geoheritage protection in its district prior to advertising the PWDP and that has led us to this situation.
- 11.27 We also once again note that our Society has been calling upon Franklin District Council and the expanded Waikato District Council for more than 20 years (Appendix 4) to adequately address the protection of its geoheritage features and in particular its volcanoes (see Appendix 2) and limestone karst areas.
- 11.28 It is more than unfortunate that WDC has overlooked these calls and that the landscape architect firm of Boffa Miskell has not pointed out to WDC that the geoheritage of the district was not being adequately assessed for protection within their Waikato District Landscape Study.
- 11.29 As proposed by us elsewhere in this evidence we request this hearing to do the right thing by the geoheritage of Waikato District and insert a clause/s that requires a plan change process to get underway and be complete in reasonable time (several years at most).

12. GSNZ SUBMISSION POINT 8.4

“Add more policies and rules to protect Outstanding Natural Features and provide criteria for the potential identification of others.”

12.1 WDC 42A report recommendation: Reject.

12.2 Criteria for the potential identification of other geoheritage ONFs is addressed by our submission point 8.5 below.

12.3 WDC Report 42A section 138 states:

138. The Geoscience Society of New Zealand [8.5] requests the addition of assessment criteria in Section 3.3 to assist with the identification of an ONF, similar to the approach taken by the Auckland Unitary Plan and Northland Regional Plan. Additional policies and rules for geopreservation sites are also requested, although no specific wording has been provided.

12.4 GSNZ does not consider it is our role to draft the additional policies and rules for geoheritage ONFs for WDC. Our submission states that we recommend them to be similar to those in the AUP, Northland Regional Policy Statement and Whangarei District Plan that have already passed through the hearings stages and are now operative.

12.5 During the further submission stages we also sent the GSNZ Best Practice Guide for ONFs (Appendix 1) to WDC and this is stated as having been forwarded to Boffa Miskell in their response. As you will see in Appendix 1 this has as section 6.2 an example of a possible Activity Table that has been developed and is now operative (with slight differences) in various existing and proposed District Plans around northern New Zealand.

12.6 We assert that these additional policies and rules **are needed** for geoheritage ONFs in the PWDP because all the proposed policies and rules have been developed for landscape sites (ONL, ONF landscape, SAL) and address protecting the landscape values of those sites and do **NOT** necessarily address or give the required level of variable protection required by the highly diverse geoheritage values of ONFs.

12.7 Example 1 - some geoheritage ONFs are exposures of natural rock that would benefit from periodic bulldozing, quarrying or grader scraping. The exposed rock values of these ONF would be adversely impacted by landform remediation, revegetation, hydroseeding or the construction of retaining walls (e.g. Daff Rd Jurassic Plant beds, Port Waikato to Tuakau Bridge Road Jurassic Section). All these impacts are the opposite to what might be considered in trying to reduce the adverse effects on outstanding natural landscapes, large or small, or SALs.

12.8 Example 2 - another category of geoheritage ONF is caves, which mostly require protection from increased soil runoff (and therefore from vegetation clearance or open earthworks) in their catchments and from deep quarrying overhead, but the landscape overhead is of less concern and need not be governed by rules that don't have impact on the cave (e.g. caves in Waikawau karst, Helectite Hole karst and Nikau Cave).

12.9 Example 3 - two other categories of geoheritage ONFs are small fragile landforms and small geological exposures. In both of these categories, some ONFs may be very small – e.g. a rock exposure less than 5 sq. m in size or a tiny landform of only a few tens of

cubic metres in volume (see Appendix 1). Proposed earthworks of small volume that are currently permitted in ONFs in the PWDP with or without a resource consent could completely destroy some of these geoheritage ONFs within a few minutes. If outstanding sites are this small and fragile they require absolute protection and tight mapping in the hope that this will be enough to protect them (e.g. Huriwai Beach Jurassic plant beds, Opuatia cliffs Jurassic fossils, Puketoka conglomerate, Carters Beach shore platform, Raglan coastal karst).

12.10 Example 4 – Dynamic landforms and processes include sand dunes and hot and cold springs, where activities well outside the mapped extent of the ONF may have considerable adverse effect on the features geoheritage values. For example the adverse impacts of an application to undertake offshore dredging of sand updrift of a sand dune ONF needs to be considered; or the adverse effects of a proposal to drill for water outside the boundaries of a hot water ONF (e.g. Waikorea and Waingaro Hot Springs) needs to be considered.

12.11 As discussed earlier, the landscape architect community and some in the legal fraternity seem to be arguing that ONLs must be restricted to large landscape areas. They have recognised what we in the geoscience community realised many years ago, that outstanding natural landscapes have a diversity of scale and vulnerability and are therefore trying to co-opt the term ONF for “small landscape features” instead of creating several size categories within ONL, as and when required. As a result they have invented the term ONFL to cover the different sizes of ONLs and have subverted the original meaning of an ONF.

12.12 Leaving aside the small landscapes and ONFLs, geoheritage ONFs come in a diversity of sizes, diversity of types with a corresponding diversity of threats to their values.

12.13 It is for this reason that a number of categories of ONFs were developed by geoheritage experts in Auckland City Council in the 2000s and are now applied in the AUP and a number of other northern plans, operative and proposed. These categories are described in detail in Appendix 1, Best Practice Guide for ONFs section 6. In summary they are:

- A. Large robust landforms;
- B. Small fragile landforms;
- C. Dynamic landforms and natural systems;
- D. Large geological exposures;
- E. Small fragile geological exposures of rock;
- F. Caves;

V. Volcanic Cones.

12.14 If geoheritage ONFs are to be included in the PWDP now and through a plan change process as we recommend, then additional appropriate policies and rules are necessary to recognise their diversity and the different types of values that need different kinds of protection and allow other activities to continue as usual.

13. GSNZ SUBMISSION POINT 8.5

“Add into section 3.3 Outstanding Natural Features criteria for identifying Outstanding Natural Features, and we recommend wording similar to that in the Auckland Unitary Plan, Northland Regional Plan and other local districts:

“Assessment criteria for identifying ONFs

- (a) the extent to which the landform, feature or geological site contributes to the understanding of the geology or evolution of the biota in the region, New Zealand or the earth;*
- (b) the rarity or unusual nature of the site or feature;*
- (c) the extent to which the feature is an outstanding representative example of the diversity of district's natural landforms and geological features;*
- (d) the extent to which the landform, geological feature or site is part of a recognisable group of features (e.g. caves and karst group; South Auckland volcanoes group);*
- (e) the extent to which the landform or geological feature contributes to the aesthetic value or visual legibility of the wider landscape;*
- (f) the extent of community association with, or public appreciation of, the values of the feature or site;*
- (g) the potential value of the feature or site for public education;*
- (h) the potential value of the feature or site to provide additional understanding of the geological or biotic history;*
- (i) the state of preservation of the feature or site;*
- (j) the extent to which a feature or site is associated with an historically important natural event, geologically related industry, or individual involved in earth science research;*
- (k) the importance of the feature or site to Mana Whenua” [from Auckland Unitary Plan]”*

13.1 WDC 42A report recommendation: Reject.

13.2 WDC Report 42A sections 138, 139 state:

138. The Geoscience Society of New Zealand [8.5] requests the addition of assessment criteria in Section 3.3 to assist with the identification of an ONF, similar to the approach taken by the Auckland Unitary Plan and Northland Regional Plan. Additional policies and rules for geopreservation sites are also requested, although no specific wording has been provided.

139. I am unclear as to the value of adding these criteria to the PWDP if they are already contained in the WRPS. In addition, the scheduling of a new site in the PWDP would require a plan change or variation, and Section 3.3 would appear not to apply anyway because it refers to ONF that are 'identified', and the definition for an ONF also refers to a mapped area.

13.3 Many District Plans that **do not** specifically schedule or list ONFs have included these geoh heritage identification criteria within them. These recognise that the plan has not captured or identified all/any of their geoh heritage ONFs and provides the guidance and certainty needed to identify one should the situation arise, so that potential adverse effects on their values can be considered in resource consent applications.

13.4 Most District Plans and the Auckland Unitary Plan (see 10.5) that **do** schedule many geoheritage ONFs also list the criteria that have been used for assessing these sites to be ONFs for the sake of transparency and for use in considering any future possible ONF additions (through plan changes etc).

13.5 Extract from Auckland Unitary Plan Schedule 6 ONFs

The factors in B4.2.2(4) have been used to determine the features included in Schedule 6 Outstanding Natural Features Overlay Schedule, and will be used to assess proposed future additions to the schedule.

13.6 We reluctantly recognise that it is now too late to undertake a non-prejudicial addition of any of our proposed ONFs to the PWDP during the current exercise (as opposed to those that are currently ONFs). We therefore submit that it is now additionally IMPERATIVE that criteria for identifying them be included in the PWDP should any issue arise before they are properly considered, advertised and scheduled as ONFs through a plan change or other process that we advocate.

13.7 Thus to give some level of protection to the geoheritage resources of the District in the meantime, it is necessary to spell out how any currently unscheduled features might be recognised and what their values might be that need to be protected from adverse effects.

13.8 We suggested in our submission a set of criteria taken from the operative AUP and Northland Regional Policy Statement. We note that an updated set of these possible criteria that could be used is given in GSNZ's Best Practice Guide for ONFs (Appendix 1 of this evidence) which was submitted to WDC as part of the further submission process and is mentioned in the Boffa Miskell technical response document.

13.9 WDC Report 42A section 139 seems to suggest that these criteria for recognising ONFs is contained in the Waikato RPS and therefore not needed in the PWDP. The WDC Report 42A is mistaken on this point. The WRPS gives NO criteria for recognising geoheritage ONFs, only landscapes as argued in section 6 of this evidence above.

14. We request to have our evidence presented in person at the hearings.

Yours sincerely



Bruce W Hayward PhD FRSNZ MNZM

Chairperson, Geoscience Society of NZ Geoheritage Subcommittee