Determination 2026/043

Regarding the compliance of a retaining wall and associated sitework with Clause B1 *Structure*, and related decisions by an authority

178 Penruddock Rise, Westmorland, Christchurch

Summary

This determination relates to the construction of a new blockwork retaining wall and associated sitework. It considers three matters: whether the retaining wall and associated sitework complies with Clause B1 *Structure* as it relates to other property, the authority's decision to issue a code compliance certificate for the building work, and the authority's alleged failure to issue a notice to fix in relation to the building work.



Figure 1: Photograph of the retaining wall at 178 Penruddock Rise.

In this determination, unless otherwise stated, references to "sections" are to sections of the Building Act 2004 ("the Act") and references to "clauses" are to clauses in Schedule 1 ("the Building Code") of the Building Regulations 1992.

1. The matter to be determined

1.1. This is a determination made under due authorisation by me, Andrew Eames, Principal Advisor Determinations, for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment ("the Ministry").[1]

1.2. The parties to the determination are:

1.2.1. D and A Maclennan, the owners of other property at 184 Penruddock Rise and the applicants for the determination ("the applicants").

1.2.2. S and J Rewi, the owners of 178 Penruddock Rise ("the owners").

1.2.3. Christchurch City Council, carrying out its duties as a territorial authority or building consent authority ("the authority").

1.2.4. A Higgins, a licensed building practitioner concerned with the building work ("the builder").

1.2.5. J Marsh, a licensed building practitioner concerned with the building work ("the structural engineer").

1.3. This determination arises from concerns raised by the applicants about the construction of a new blockwork retaining wall and associated earthworks at the owners' property, including whether the retaining wall and associated sitework comply with Clause B1 *Structure* as relates to other property, and decisions made by the authority in relation to the building work. The applicants allege that the works encroach onto their property and that, following completion of the building work in early 2023, there has been an excessive degree of resultant ground movement.

1.4. The matters to be determined, in terms of sections 177(1)(a), (1)(b), (2)(d) and (2)(f), which I note are limited under section 176(e)(i) by the applicants' party status as the owners of other property, are:

1.4.1. <u>First matter: Clause B1 compliance</u>

Whether the new retaining wall and associated sitework complies with Building Code Clause B1 as they relate to other property.

[1] The Building Act 2004, section 185(1)(a) provides the Chief Executive of the Ministry with the power to make determinations.

1.4.2. Second matter: The code compliance certificate

The authority's decision to issue a code compliance certificate in relation to compliance with clause B1 as relates to other property.

1.4.3. Third matter: notice to fix

The authority's alleged failure to issue a notice to fix in relation to the construction of the new retaining wall as relates to other property.

Issues outside this determination

1.5. The design for the new retaining wall forms part of the building work detailed in building consent BCN/2021/7199[2] for the construction of a new detached dwelling at the owners' property.[3] In this case I am only concerned with the compliance of the new retaining wall and associated sitework, and not with any other aspect of the building work completed as part of that consent.

2. Background and building work

2.1. The applicants' property at 184 Penruddock Rise is situated to the southeast[4] of, and uphill from, the owners' property at 178 Penruddock Rise. Both are sloping sections with the land sloping across the sites from east to west.

2.2. The owners applied for a building consent on 31 August 2021, which was granted by the authority on 21 December 2021. The consented work comprises a single storey, split-level dwelling with an attached garage, an associated retaining wall, and siteworks. The retaining wall is made up of three continuous sections: the driveway section, the garage section, and the courtyard section[5].

2.3. In this case, the relevant building work that is in dispute is the retaining wall (specifically the garage and courtyard sections of wall) and the associated siteworks to backfill behind the wall and form a battered slope behind the wall, which together form a courtyard and landscaped area along the property's southeastern boundary.

2.4. The retaining wall is formed from 200 series concrete blockwork on in-situ concrete footings, with a proprietary tanking system (i.e. structural waterproofing) installed

[2] Issued 21 December 2021.

[3] The matters to be determined do not include the decision by the authority to grant and issue the building consent on 21 December 2021.

[4] For clarity and consistency, I refer to the owners' property boundaries in line with the labelling provided in plan A2010 of the building consent documentation.

[5] Referred to as 'BW1' on the structural plans.

along the garage section. A field drain is shown to the rear of the retaining wall footing, falling to a sump and wider site drainage.[6]

2.5. The structural plans in the building consent provide for 300mm minimum of "free draining ... backfill" to be placed to the rear of the retaining wall, with a maximum retained height of 1.5m for the courtyard section. Grade AP65 hardfill was to then be placed behind the wall in 200mm layers, followed by 'general fill' above both backfill and hardfill, followed by grading to create the finished slope behind the wall and the planting of vegetation.

2.6. The fill behind the garage section of the retaining wall was to be "Free-draining min 300mm thick (no fines) backfill in layers with adjacent hardfill to geotechnical specifications. Wrap in geotextile."

2.7. In early 2021, a geotechnical engineer ("the geotechnical engineer") engaged to investigate pre-construction soil conditions at the site subsequently made the following design recommendation in their soil investigation report[7]:

> ... an Ultimate Bearing Capacity of 200kPa at 0.3m below existing ground or 300kPa at 0.4m below existing ground in the design of the garage floor slab and retaining walls ...

2.8. In addition, the building consent documentation noted:

2.8.1. Construction monitoring was to include inspection by a geotechnical engineer of "backfill behind retaining walls", specifically in relation to "compaction adequacy".

2.8.2. The design features report ("DFR") and geotechnical report considered "good ground" could be established on site at 400mm depth.

2.9. During the building consent processing, the geotechnical engineer advised the authority they "[had] not observed any indicators of slope movement or instability".

2.10. On 18 August 2022, a minor variation was issued regarding skylights, roofing, wall linings, and joinery products; however, as this work is not relevant to the scope of this determination I have not considered it further.

2.11. In March 2022, building work commenced at the owners' property, including construction of the retaining wall and benching of the slope behind the wall. At some stage during the course of carrying out the siteworks, the work to bench the slope extended into the applicants' neighbouring property at 184 Penruddock Rise, along the owners' southeast boundary.

2.12. On 2 March 2022, the geotechnical engineer conducted a site inspection of "the prepared site scrape and excavated foundations bearing" and found "The soils are

[6] Building consent plans A4740 and A7400.

[7] Dated 3 March 2021.

very firm ... with bearing at least 300 kPa ULS" and confirmed "we believe that the prepared foundations are ready to continue construction and receive reinforcement and concrete".

2.13. The authority carried out its first inspection on 3 March 2022, followed by a number of other inspections across 2022-2023 as the building work progressed, including:

2.13.1. A block work inspection on 27 April 2022, which passed, stating:

> Block Size & Construction:
>
> 200 Series
>
> Bond Pattern: Staggered
>
> Control joint locations confirmed
>
> Clean outs observed, steel starter coverage achieved and bond clean.
>
> Reinforcing
>
> SED design as per engineers detail
>
> HD16s @ 400crs vertically & HD12s @ 400crs horizontally.

2.13.2. A subfloor inspection on 1 May 2022, which included:

> Building location: Fail
>
> Building setout certificate provided at earlier inspections. A building location certificate is required for the following stages.
>
> Stage 1 of 2 – Provide a B-081 certificate from a registered professional surveyor or licenced cadastral surveyor for building location relative to boundaries and floor level relative to a datum (At this stage)
>
> ...

2.13.3. A drainage inspection on 5 October 2022, including "Retaining wall – photos for installation of drainage in the block wall", with "Drain location [being] Concrete retaining wall 1: Left side boundary" which passed the inspection.

2.13.4. A final inspection on 21 February 2023, which included a "Pass" for "Retaining Walls: Type & Location: Block".

2.14. In addition, the following structural engineering inspections were carried out:

2.14.1. On 24 March 2022 the structural engineer noted "some landscaping may be required to maintain max retained height".

2.14.2. On 26 April 2022 the structural engineer noted the max retained height did not exceed 1.2 metres.

2.15. On 20 February 2023, the structural engineer issued a PS4, which does not appear to include a record of any backfill compaction inspection having been carried out by

the geotechnical engineer (or by any other engineer), or details regarding "landscaping", fill used, compaction tests, and related work.

2.16. On 5 April 2023, the authority issued a code compliance certificate for the building work, and at some later date vegetation was added to the slope behind the retaining wall.

2.17. Photos provided by the applicants and dating from June and August 2024 show surface cracks formed in the ground on the applicants' side of the boundary immediately adjacent to 178 Penruddock Rise, and a new kink in the timber boundary fence located above and behind the retaining wall between the two properties.

2.18. The applicants subsequently applied for a determination.

3. Submissions

The applicants

3.1. The applicants submit (in summary):

3.1.1. There has been "slumping of 50-150mm" along the boundary between the properties which they consider is due to "excavations across or very near the boundary".

3.1.2. "[S]itework and retaining walls have not withstood imposed loads and have caused damage to [their] neighbouring property, meaning the work does not comply with clause B1".

3.1.3. "Surface water management is inadequate … resulting in subsidence".

3.1.4. The "observed subsidence" means the authority "could not be satisfied on reasonable grounds that the work complied with the Building Code" when issuing the code compliance certificate.

3.1.5. The as-built retaining wall and slope differs from what was shown on the approved building consent plans.

3.1.6. Work extending into the applicants' land "should have been identified by [the authority]" and considered before issuing the code compliance certificate.

3.1.7. The authority "has failed to issue a Notice to Fix for non-compliant excavation and retaining wall works at 178 Penruddock Rise, despite evidence of land subsidence impacting 184 [Penruddock Rise] and structural non-conformance".

3.1.8. "By ... refusing to issue a Notice to Fix, [the authority] permitted a known subsidence risk to remain unmitigated".

3.1.9. A representative from the authority stated they observed that "an area along the fence approximately 5-10m in length has slumped by up to around 250mm (relative to other levels on the fence line). Some surface cracking is present up to around 50mm in width ...".

3.1.10. "The previously newly installed fence line is now no longer straight as it was when built, with noticeable post movement and fence line around the affected area also".

The owners

3.2. The owners did not provide a submission in relation to this determination.

The authority

3.3. The authority submits (in summary):

3.3.1. Compliance of the retaining wall is based on the design and supervision of construction having been carried out by a "CPEng engineer".

3.3.2. There is no evidence of non-compliance for the retaining wall.

3.3.3. They acknowledge there may be issues with the battered slope.

The builder

3.4. The builder submits (in summary):

3.4.1. They accept there are "ground compaction" issues, and that slumping has occurred.

3.4.2. The works were affected by "extreme weather events" and there were "unprecedented ground moisture levels".

3.4.3. Photos of the site show a discrepancy in the existing boundary line, with a "large hollow" where the slump has occurred.

3.5. The builder also provided, in their submissions, comments from the geotechnical engineer, who visited the site on 3 December 2024. This engineer was of the opinion that the "soils are stable at the current slope and angles" and "minor cracking to the soil and slumping of the fencing appears to have been from settlement of the excavated ground behind the retaining wall ... following construction". However, "no further settlement is anticipated, without external influence".

The structural engineer

3.6. The structural engineer did not provide a submission in relation to this determination.

4. Discussion

4.1. In the following paragraphs I consider the three matters to be determined separately.

4.2. The relevant building work, described at paragraph 2.3-2.6, is the construction of the courtyard and garage sections of the retaining wall, and the associated siteworks to bench the slope above the retaining wall.

First matter: compliance with Clause B1 *Structure*

4.3. The first matter is whether the retaining wall (specifically the courtyard and garage sections) complies with clause B1 *Structure* as it relates to other property.

Legislation

4.4. Section 4 of the Act sets the principles to be applied in performing functions or exercising powers, under this Act, including (but not limited to), subsection 4(2)(j):

> The need to provide protection to other property from physical damage resulting from the construction, use, and demolition of a building.

4.5. Other property is defined in section 7 of the Act as:

> (a) means any land or buildings, or part of any land or buildings, that are –
> (i) not held under the same allotment; or
> (ii) not held under the same ownership ...

4.6. As discussed in previous determinations[8], I consider that "other property" is not limited to the protection of buildings and that the land itself must also be protected from the likelihood of damage. With respect to the "likelihood of damage" I refer to the reasoning in *Selwyn Mews*, where the Judge stated:

> [47] ...In cl B1.3.6 "the likelihood of damage to other property" refers to a real and substantial risk of such damage.

[8] For example, Determination 2015/003: *Compliance of a retaining wall between two properties at 34A and 36B Ballin Street, Ellerslie, Auckland*. Issued 10 February 2015.

4.7. The parties do not dispute the new retaining wall is a building and must comply with the requirements of section 17, which states "All building work must comply with the building code to the extent required by this Act ...".

4.8. The objective of clause B1 includes to "protect other property from physical damage caused by structural failure"[9] and buildings shall withstand the combination of loads they are likely to experience during construction or alteration and throughout their lives.[10]

Compliance with B1.3.1

4.9. B1.3.1 requires buildings and sitework to have a low probability of rupturing, becoming unstable, losing equilibrium, or collapsing during construction or alteration and throughout their lives.

4.10. B1.3.3 then sets out that physical conditions which might affect the stability of the earthwork must be accounted for and gives a list of examples. In this case those physical conditions could include the self-weight of the earthwork, earth pressure, (ground) water and other liquids[11], as well as impacts over time such as creep and shrinkage.

4.11. The stability of buildings and sitework adjacent or close to boundaries is necessary to ensure that the objective of B1.1(c) (that is, protection of other property from physical damage caused by structural failure) is met.

4.12. In addition, clause A2 *Interpretation* provides:

> **sitework** means work on a building site, including earthworks, preparatory to or associated with the construction, alteration, demolition, or removal of a building.

4.13. In this case, clause A2 provides the battered slope is earthworks associated with construction of the relevant building work (being the retaining wall at 178 Penruddock Rise). I note the incline of the battered slope (and any flow-on impacts of required conditioning/strengthening of the fill behind the wall) relate to the wall's design and final height.

4.14. Some settlement of earthworks is to be expected over time within an appropriate tolerance.[12] In this case, the test is whether the level of settlement observed is to such a degree to that the earthworks have, or are likely to have, a more than low

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9 Clause B1.1(c).

10 Clause B1.2.

11 I note the applicant framed their submissions regarding the effects of water in terms of clause E1 – *Surface Water*. However, for the purpose of assessing compliance with clause B1, I am of the view that it is more appropriate to consider those effects as physical conditions under clause B1.3.3.

12 For example, see NZS 4311:2022 *Engineered fill construction for lightweight structures*, which offers guidance around different types of fill. It describes soil conditions, some of which require specific treatment, including saturated soils, alongside expected properties of that fill, as well as required compaction/settlement testing.

probability of becoming unstable, with the result that other property has not been protected or will not be protected.

4.15. The submissions provided by the parties and other evidence I have seen show that the siteworks extend over the boundary between the owners' and the applicants' properties and into 184 Penruddock Rise. The sitework has also subsequently settled between 50-250mm vertically and there is visible cracking on the slope surface on the applicants' property.

4.16. It is not clear from the evidence what mechanism has caused the observed settlement. Possible contributing factors may include ground movement, internal erosion, or inadequate or inappropriate compaction of the fill material. However, I note there is no evidence before me indicating that the blockwork elements of the retaining wall have tilted or are themselves exhibiting signs of structural failure.

4.17. There is no evidence that the fill used to form the slope behind the courtyard section of the retaining wall was specified or selected by reference to particular material properties. The characteristics of fill, including its composition, particle size and moisture content, are relevant to its behaviour under imposed loads and in response to groundwater and other moisture conditions. In the absence of information about the fill that was used, I am unable to establish that the resulting earthworks were designed and constructed to adequately account for the physical conditions referred to in Clauses B1.3.3(a), (d) and (e).

4.18. There is also no evidence that compaction testing, or associated geotechnical supervision of that testing, was undertaken in relation to the backfill or finished slope behind the courtyard section of the retaining wall, notwithstanding that such testing was provided for in the building consent documentation. Appropriate compaction is necessary to achieve the density and stability required for the particular fill material and site conditions. This is particularly relevant given the builder's comments regarding ground moisture levels.[13]

4.19. The subsequent performance of the siteworks is also relevant. Post-construction settlement has occurred, including slumping observed at 184 Penruddock Rise and warping of the timber boundary fence between the properties in the affected area. I consider the extent of this movement, occurring within two years of completion of the building work, to be excessive.

4.20. The fact that settlement has occurred, together with the absence of evidence regarding the fill specification and compaction testing, leads me to conclude that the earthworks do not adequately account for a combination of the effects of self-weight, earth pressure and moisture, or for the effects of creep and shrinkage over time, including where those effects may impact other property.

[13] Paragraph 4.4.4 of NZS 4311:2022.

4.21. I acknowledge that a geotechnical engineer has inspected the site following the settlement and has expressed the opinion that no further settlement is anticipated. That opinion is relevant to the likely future behaviour of the siteworks, but it does not alter the fact that settlement has already occurred. In my view, the observed settlement is excessive and is evidence that the siteworks have not performed as required.

4.22. Given the degree to which the siteworks have moved within the timeframe observed, due to one or more factors as set out in B1.3.3, I consider the siteworks associated with the retaining wall in this case have failed to meet the test in B1.3.1 of having a low probability of becoming unstable. In addition, the slumping observed at 184 Penruddock Rise demonstrates this instability affects other property, meaning that other property has not been protected as required.

4.23. For these reasons, I conclude the siteworks associated with the retaining wall do not comply with B1.3.1 as it relates to the protection of other property.

Compliance with B1.3.6(b)

4.24. B1.3.6(b) requires that building work, including siteworks, be carried out to avoid the likelihood of damage to other property.

4.25. In this case, I have found the siteworks extending onto 184 Penruddock Rise (that is, 'other property') have had a more than low probability of becoming unstable, with the result of surface cracks and ground movement on other property.

4.26. I consider that, having caused other property to become partly unstable, the sitework associated with the retaining wall has caused physical damage to other property and consequently I conclude the building work does not comply with B1.3.6(b).

Second matter: the code compliance certificate

4.27. The second matter concerns the exercise of the authority's power of decision to issue a code compliance certificate on 5 April 2023, in relation to compliance with clause B1 *Structure* as relates to other property.

4.28. The applicants have submitted that, when issuing the code compliance certificate, the authority should have considered that the work did not comply with the Building Code because it encroached on their property.

4.29. Section 94 of the Act outlines matters an authority must consider in deciding whether to issue a code compliance certificate. In particular, section 94(1)(a) states:

> (1) A building consent authority must issue a code compliance certificate if it is satisfied, on reasonable grounds, –
>
> (a) that the building work complies with the building consent; and ...

4.30. A building consent is granted under section 49 of the Act, which states:

> (1) A building consent authority must grant a building consent if it is satisfied on reasonable grounds that the provisions of the building code would be met if the building work were properly completed in accordance with the plans and specifications that accompanied the application.

4.31. Compliance with the building consent and any associated minor variations and amendments, which are granted under section 49, ensures that the work will therefore comply with the Building Code.[14]

4.32. In this case, the work described in the building consent, including siteworks, refers only to work undertaken at the owners' property at 174 Penruddock Rise. Any other building work that extends into the neighbouring property at 184 Penruddock Rise is therefore not in accordance with the consent.

4.33. I have already concluded that the siteworks have been found not to comply with the requirements of clause B1, specifically B1.3.1 and B1.3.6(b), of the Code. As discussed in previous determinations,[15] code compliance certificates are issued in relation to building consents which are in turn based on the section 49 test that compliance with the Building Code will be achieved if building work is carried out in accordance with the approved plans and specifications.

4.34. Consequently, I conclude the test described in section 94 has not been met as the building work does not comply with either the building consent or the Building Code.

4.35. Although I have concluded the test in section 94 was not met, it does not necessarily follow that the appropriate outcome of the determination is to reverse that certificate. In Estate Properties Ltd v Hastings District Council, the District Court accepted that the Chief Executive may decline to grant one of the remedies in s188(2)(a), including where a decision was incorrectly made but reversal would not provide an appropriate outcome in the circumstances.

4.36. In exercising that discretion, I have taken into account the nature and extent of the non-compliance identified in this determination and the significant consequences that would follow from reversing the code compliance certificate. The matters considered in this determination concern the retaining wall and associated siteworks, which comprise only a relatively small part of the building work covered by the consent. The code compliance certificate applies to the building work under the consent as a whole. Reversing it would therefore affect the status of

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[14] See Determination 2012/053 *Regarding the refusal of a code compliance certificate for a retaining wall subject to earthquake damage at 13 Moores Road, Akaroa*, issued 2 August 2012, at [4.1]-[4.2] and Determination 2024/070 *An authority's decision to refuse to issue a code compliance certificate in relation to a hedge and safety from falling*, issued 16 December 2024, at [5.19]-[5.21] for further context on the connection between code compliance certificates, building consents, and Building Code compliance.

[15] Determination 2024/070 at [5.19].

substantially more building work than that which I have found to be non-compliant, and would have significant consequences for the owners that are disproportionate to the scope of the non-compliance identified.

4.37. I consider the finding of non-compliance with the Building Code is a serious consequence in itself and allows for a range of options to potentially rectify the situation between the parties.

4.38. In those circumstances, I do not consider reversal of the code compliance certificate would be an appropriate outcome. Nor, having concluded that the section 94 test was not met, is it appropriate to confirm the authority's decision. I therefore exercise my discretion not to confirm, reverse, or modify the authority's decision to issue the code compliance certificate.

Third matter: the alleged failure to issue a notice to fix

4.39. The third matter is whether the authority failed to exercise a power of decision to issue a notice to fix for building work relating to siteworks associated with the new retaining wall constructed at 178 Penruddock Rise under building consent BCN/2021/7199.

4.40. As discussed above, I have already determined that the siteworks do not comply with clause B1 (specifically B1.3.1 and B1.3.6(b) as relates to other property), and that a code compliance certificate should not have been issued for the building work.

4.41. The relevant legislation relating to notices to fix can be found in subpart 8 of the Act, sections 163 to 168.

4.42. Section 163 defines what is meant in the subpart by “a specified person”:

> **Specified person** means –
> (a) the owner of a building:
> (b) if a notice to fix relates to building work being carried out, –
> (i) the person carrying out the building work; or
> (ii) if applicable, any other person supervising the building work:
> (c) ...

4.43. Section 164 sets out the circumstances in which a responsible authority can issue a notice to fix, with the relevant provisions in this case being as follows:

> **164 Issue of notice to fix**
> (1) This section applies if a responsible authority considers on reasonable grounds that –
> (a) a specified person is contravening or failing to comply with this Act or the regulations (for example, the requirement to obtain a building consent); or

(b) ...

(2) A responsible authority must issue to the specified person concerned a notice (a notice to fix) requiring the person –

(a) to remedy the contravention of, or to comply with, this Act or the regulations; or

(b) ...

4.44. Accordingly, for the authority to issue a notice to fix for the building work on the retaining wall and associated siteworks it must have grounds to consider that any specified person was contravening, or failing to comply with, the Act or the Building Code.

4.45. I have already identified contraventions of section 17 (which generally provides that building work must comply with the Building Code to the extent required by the Act) and section 40 (which generally provides that building work must be carried out in accordance with a building consent).

4.46. I consider the authority was on site on a number of occasions for inspections and therefore had an opportunity to identify the contravention.

4.47. As specified persons (being the owner of the building and the builder carrying out the building work) were contravening the Act, the test in section 164(1)(a) was met and consequently there was a failure to issue a notice to fix.

4.48. I note that this failure to issue a notice to fix is limited to the contravening siteworks on the owners' property only (i.e. at 174 Penruddock Rise). As discussed in a previous determination[16], a notice to fix cannot be issued requiring an owner to effect a remedy on someone else's property as the owner being able to do so relies on agreement from the neighbouring owner. Resolving the issue of contravening siteworks on the applicants' property is a civil matter for the respective owners.

[16] Determination 2023/033: *Regarding the compliance of, and decisions made by an authority in relation to, building work encroaching on to a neighbouring property*, issued 7 December 2023, at [6.82]-[6.83].

5. Decision

5.1. In accordance with section 188 of the Building Act 2004, I hereby determine:

5.1.1. The retaining wall and associated sitework do not comply with clauses B1.3.1 and B1.3.6(b) as they relate to the protection of other property.

5.1.2. The test in section 94(1) was not met; however, for the reasons given at 4.36-4.38, I elect not to confirm, reverse or modify the code compliance certificate issued by the authority on 5 April 2023.

5.1.3. The test in section 164(1)(a) was met and the authority failed to exercise a power of decision to issue a notice to fix.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 2 November 2026.

Andrew Eames

Principal Advisor Determinations